january
june
1966
Vol. 176

ENGINEERING NEWS-RECORD

Serving The Entire Construction Industry

Index

. . . of editorial content

McGraw-Hill, Inc.
330 West 42nd Street, New York, N.Y. 10036

Read Before Using This Index

Every item appearing in ENGINEERING NEWS-RECORD is indexed with the exception of certain Briefs (such as Labor Briefs, Careers) and of Obituaries.

All articles are indexed **alphabetically** by subject. Under each heading entries are listed **chronologically**.

Many important headings are divided into sub-headings, e.g., BRIDGES–by states or countries; CITIES–by name; BUILDINGS–by type (churches, garages, etc.).

The second part of this index contains names of authors, personalities and companies. Here are listed the names of people who are the subject of articles; names of authors of by-lined articles and published letters; and names of firms about which articles were written. Individuals or firms merely mentioned in feature articles dealing with various construction projects are seldom indexed by their names.

Items that describe new materials and equipment, including Product Briefs, are indexed under the PRODUCTS heading, by manufacturer's name, in the third part of this index.

Entries concerning only particular projects or firms are not repeated under the general heading. For example, an article about the Smith Construction Co. appears only in the NAMES section of the Index and will not be found under the heading: CONTRACTORS. A news item about bonds issued for the New Jersey Turnpike will be listed in the New Jersey section of HIGHWAYS and will not be found under: CONSTRUCTION, • Financing, where general stories on bonds are listed.

See means that all entries on the subject will be found under another heading, thus: EROSION, **see:** SOIL

See also means that a related heading should also be checked, thus: SEWAGE, **see also:** WATER POLLUTION

The following abbreviations and signs are used:

RC –– Reader Comment
CW –– Construction Week
WO –– Washington Observer
B –– Brief and Around the World
e –– Editorial
** –– Article with many illustrations
* –– Illustrated article (if asterisk precedes entry, reference is to a picture with caption only)

ENGINEERING NEWS-RECORD is published every Thursday. There are 25 or 26 issues in each half-yearly volume, covering January to June and July to December, starting with vol. 78 in 1917, when ENGINEERING NEWS and ENGINEERING RECORD joined forces under our present title.

If you would like any information about material that ENR has published, do not hesitate to make direct inquiry by mail or telephone to: Mrs. Eva Gierat, McGraw-Hill Inc., 330 West 42nd Street, New York, N.Y. 10036; telephone (212) 971–3507.

ENGINEERING NEWS-RECORD INDEX

January-June 1966

A

ACCIDENTS, DISASTERS, FAILURES; SAFETY
see also: SOIL; WEATHER

Mexican embankment fails in heavy rains,*. p13 ... Jan 6
Swedish sports hall roof collapses,*. p15 ... Jan 6
Chicago sewer tunnel blast kills worker. B p25 ... Jan 6
NLRB rules on safety regulations. CW p17 ... Jan 13
FPC and safety in gas pipelines. WO p63 ... Jan 27
Hwy fails in Austria,*. p102 ... Jan 27
Floor overload blamed in New York City's building failure in Hell's Hundred Acres. p17 ... Feb 3
Barges smash bridge deck in St. Louis. p25 ... Feb 17
Tampa bank's facing bulges out,*. p15 ... Feb 24
Timber framed roof collapses under snow in Sweden,*. p17 ... Feb 24
Sheared bolts caused collapse in NYC's Hell's Hundred Acres,*. p18 ... Feb 24
Gas kills 17 in Swiss hydro tunnel. p19 ... Feb 24
Chicago viaduct span slips its bearings,*. p15 ... Mar 3
British cooling tower failure is puzzle. p28 ... Mar 3
Raritan River rail bridge span smashed,*. p19 ... Mar 10
Tornadoes destroy bldgs in central Mississippi. p19 ... Mar 10
Asking for trouble with no safety helmets,*. RC p8 ... Mar 17
Dry chemical extinguisher douses all fires,*. p220 ... Mar 17
International Labor Organization names safety consultants. p311 ... Mar 17
Japanese landslide kills 11 dambuilders,*. p16 ... Mar 31
Mexican expressway crumbles,*. p16 ... Mar 31
Wall facing falls off Tampa hotel. B p78 ... Apr 7
Chicago viaduct slippage explained. p78 ... Apr 7
Probe seeks Raleigh, N.C. supermarket roof collapse cause,*. p72 ... Apr 7
Reinforced concrete bldg collapses in Ottawa,*. p72 ... Apr 7
Wind topples TV tower in Roswell, N.M. p19 ... Apr 14
Delaware River Bridge form collapse kills two,*. p18 ... Apr 14
Fire destroys Atlanta bridge,*. p19 ... Apr 28
Old bearing wall bldg collapses in St. Louis. p28 ... Apr 28
Safety procedures save big money for New York contractor,**. p33 ... May 5
Earthquake in Tashkent, Russia. CW p11 ... May 5
Verdict on Ottawa building collapse. CW p11 ... May 5
Bulgaria: Failure of earthfill dike destroys village of Zgoregrad. B p27 ... May 12
Safety doesn't just happen: a good record needs work. e p108 ... May 12
Collapses and failures take heavy toll: formwork in Athens, steel dome in Jamaica, roof in Sicily, Dallas Trade Mart cantilever, Maryland cave-in, school gym in Fargo, N.D.,** p30 ... May 19
Inexcusable trench cave-in. e p104 ... May 19
County courthouse, Washington collapse threat. p83 ... May 19
Univ of Mich precast garage columns tumble in wind. p21 ... Jun 2
County Courthouse, Washington, is in no danger of collapse. CW p11 ... Jun 9
Wind gusts fell Pittsburgh's university bldg steel frame,*. p18 ... Jun 9
Golden mean and guidelines in construction inspection and safety measures. RC p16 ... Jun 16
Tornado, twisters damage Topeka and Chicago; Alma hurricane in Caribbean,**. p74 ... Jun 16
Cracking columns afflict Cleveland hwy viaduct. p78 ... Jun 16
Maryland contractor fined for fatal ditch collapse. p300 ... Jun 16
Heat kills four in Skokie, Ill, sewage pipe inspection job. p1 ... Jun 23
FPC has doubts about has pipeline safety, map. p20 ... Jun 23
Shoring collapse kills three in Montreal foundation excavation,*. p14 ... Jun 30

ACOUSTICS, NOISE CONTROL
Proper zoning and jet-noise: no homes near airports. WO p23 ... May 19

ADHESIVES, COATINGS, INSULATION, PAINT
see also: PRODUCTS

Rapid heatless process for curing paint with electron beams. p208 ... Mar 17
System coats, patterns, tints aluminum. p166 ... May 26
Glass insulation doubles as roof deck at Penna hospital,*. p150 ... May 26

AERONAUTICS, see: AIRCRAFT; AIRPORTS; SPACE

AID, see: CONSTRUCTION, •Foreign

AIR CONDITIONING, HEATING, VENTILATION,
see also: PRODUCTS,

Supplemental data on total energy. RC p57 ... Jan 27
Leap in all electrical buildings. B p25 ... Mar 10
Ultrasonic vibrations pinpoint leak in airconditioning duct,*. p192 ... Mar 17
Electronic controller regulates electric heat, diag. p48 ... Mar 24
Temporary heaters restricted in St. Louis. B p78 ... Apr 7
Stockholm stadium to heat playing field for greener grass. B p21 ... Apr 21
New standards for water-chilling package units. B p21 ... May 5
Air-Conditioning & Refrigeration Institute estimates systems put in place last year at $1 billion. B p79 ... May 26
Electric heating for Swedish department store. p164 ... Jun 16
Heating and cooling tricks disclosed by Con Edison at Tarrytown meeting. p18 ... Jun 23

AIRCRAFT, AIR LIFT
Helicopter exchanges damaged panel in Phila shopping center,*. p20 ... Mar 10
Helicopters as flying ambulances in Philadelphia: B p21 ... Mar 24
Flying buses planned to carry passengers to airports. B p78 ... Apr 7
Airbuses may serve the Boston-Washington corridor. B p21 ... Apr 21
Boeing new jet to carry 490 passengers, requires few airport modifications. p24 ... Apr 28
Helicopter buses for airport transportation, to be studied in Los Angeles. p19 ... May 5
Helicopter takes Hudson River water samples,*. p148 ... May 26

AIR POLLUTION, see: HEALTH

AIRPORTS
see also: BUILDINGS, •Terminals
PAVING

•American
Jackson, Fla, Municipal Airport job unit prices. p35 ... Jan 6
FAA's National Airport Plan suggests 887 facilities. p23 ... Jan 13
San Francisco new international airport may rest on fill. p15 ... Feb 3
Bluegrass Field, Lexington, Kentucky to take jet landings. B p21 ... Mar 24
FAA to supply emergency generators to 50 airports. B p21 ... Mar 24
San Francisco airport runway unit prices. p58 ... Apr 14
Charleston, W. Va., may get new jetport. p21 ... Apr 14
Boston airport taxiways unit prices. p60 ... Apr 28
Senate holds airport aid level. p26 ... May 12
FAA plans to modernize and double the capacity of Washington Airport. B p27 ... May 12
Proper zoning and jet noise: no homes near airports. WO p23 ... May 19
Houston airport gets monorail between terminal and parking lots,*. p150 ... May 26
Detroit airport expands, builds terminals in the round,* ...
First FAA prefab cab to top air traffic tower goes up in Georgia,*. p39 ... Jun 2
Dallas-Fort Worth airport buys land in spite of money shortage. p67 ... Jun 9
Philadelphia International Airport to quadruple capacity. p16 ... Jun 30

•Foreign
Great Britain: Liverpool Airport, to take first jets,*. p32 ... Feb 3
Japan will not build Nagoya airport yet. B p21 ... Mar 24
Japan: Floating runways planned over Osaka Bay near Kobe. p156 ... Jun 16
Lebanon to modernize Beirut airport. B p21 ... Mar 24

AIR RIGHTS, see: BUILDING DESIGN; CITIES; LEGAL DEVELOPMENTS

ALUMINUM, see also: PRODUCTS
Architect wrinkles aluminum around Markel Service circular bldg in Richmond, Va,**, diag. p30 ... Jan 6
System coats, tints, patterns aluminum. p166 ... May 26

AMERICAN Associations, Societies etc – see subject

ANCHORS, see: BEAMS, COLUMNS, FRAMES
see also: PRODUCTS

APARTMENTS, see: BUILDINGS

APPALACHIA, see: ECONOMY; HIGHWAYS

APPRENTICESHIP, see: EDUCATION
see also: ETHICS & CIVIL RIGHTS

AQUEDUCTS, see: WATER RESOURCES

ARCHES, see: BRIDGES; CONCRETE; LUMBER; ROOFS; STEEL

ARCHITECTURE, see also: BUILDING DESIGN; PLANNING & ENVIRONMENT
Cubist composition graces high income enclave in Montreal,*. p56 ... Feb 10
Is a renaissance brewing in Russian architecture?** p26 ... Mar 3
Speak out on building esthetics. RC p6 ... Mar 24
AIA fights against package builders. p36 ... Mar 31
AIA Chicago Chapter leads conference on construction costs and improved management. p23 ... Mar 31
California Supreme Court upheld right for college to retain private architects. B p78 ... Apr 7
AIA sponsors theater architecture exhibit. B p78 ... Apr 7
Engineer practicing architecture without license: conflict simmers. p78 ... Apr 21
Sculptured buildings pitch curves at "blandness",**. p38 ... Apr 28
Congress may study 6% limit on architect–engineer fees. WO p13 ... May 5
Boston architects find restoration of historic sites profitable. B p27 ... May 12
AIA Gold Medal goes to Kenzo Tange. B p79 ... May 26
Massachusetts architect choice hit as political; Gov. Volpe under fire. p231 ... May 26
AIA issues memorandum on imposter. p19 ... Jun 23
Environmental designers debate fosters progress. e p84 ... Jun 23

ARCTIC, see: WEATHER; SOIL

AREA REDEVELOPMENT PROGRAM, see: ECONOMY; PLANNING

ASPHALT, see: PAVING
see also: PRODUCTS

ASSOCIATED GENERAL CONTRACTORS,
see: CONTRACTORS

ASSOCIATIONS, see subject
see also: MEETINGS

ATOMIC ENERGY, RADIATION
see also: BUILDINGS; POWER

AEC gives up plans for Calif A-plant. p15 ... Jan 6
Great Britain to build Hinkley Point "B" nuclear power station. B p25 ... Jan 6
No nuclear excavation for Mohave Desert highway and railroad. B p27 ... Jan 13
Huge atom smasher plans postponed. WO p9 ... Jan 20
TVA plans nuclear power plant on Browns Ferry site in Alabama. p17 ... Feb 3
A-plant proposed on Lake Michigan near Kalamazoo. B p57 ... Feb 10
South Calif. to test nuclear desalter. CW p19 ... Feb 17
Largest A-plant in Sweden. p64 ... Feb 17
British nuclear plant to slash electric power costs. p17 ... Feb 24
Norway plans nuclear reactor. B p19 ... Feb 24
Plans for nuclear excavation of new Panama Canal. WO p79 ... Mar 17
Site to be found for largest atom smasher. p15 ... Mar 31
Nuclear gages control compaction in California. p148 ... Apr 7
Portable nuclear gage measures density of snow. p37 ... Apr 28
Drill holes for Nevada nuclear tests: unit prices. p132 ... Jun 16
Spain to put more A-power on line. p162 ... Jun 16
TVA orders two nuclear reactors. CW p11 ... Jun 23
Arab scientists to use nuclear particles for discovering pyramid chambers. B p21 ... Jun 23
Chicago and Michigan utilities plan A-power plants. B p21 ... Jun 23
GE quits A-power construction. p67 ... Jun 23

AUDITORIUMS, see: BUILDINGS

AUTOMATION, see: COMMUNICATIONS, AUTOMATION

AUGERS, see: PRODUCTS

AWARDS
W. S. Housel to get Distinguished Service Award from Highway Research Board. CW p7 ... Jan 20
George Atkinson, receiving Moles Award, comments on Mangla Dam. CW p7 ... Feb 3
Asphalt Institute adds 10 men to honor roll. pWYE ... Mar 17
Vienna candle shop wins aluminum award,*. p34 ... Jun 2
Awards for ten Public Works men. p53 ... Jun 23

B

BARGES, see: NAVIGATION; TRANSPORTATION

BEACH PROTECTION, see: SOIL
see also: DAMS; WALLS

BEAMS, COLUMNS, GIRDERS, TRUSSES; FRAMES
see also: CONCRETE; STEEL; PRODUCTS

Mill welds steel plate into beams. p34 ... Jan 6
Concrete Vierendeel trusses for Salk Institute lab, Calif,**, diags. p78 ... Jan 27
T-beam design strengthens rafters,*. p53 ... Feb 17
Composite studies at Lehigh Univ aid beam design,*, diags. p202 ... Mar 17
Automated CENO space frame system,*. p36 ... Mar 24
Steel frame for high rise apartment use, diag. p19 ... Apr 21
A-framed warehouse and terminal at Port Moody, B.C.,*. p140 ... May 26
Univ of Mich precast garage columns tumble in wind. p21 ... Jun 2
Cracking concrete columns afflict Cleveland hwy viaduct. p78 ... Jun 16

BIAS, see: ETHICS & CIVIL RIGHTS

BIDS, see project in question;
see: CONTRACTS & BIDS

BITUMINOUS CONCRETE, see: PAVING

BLASTING, see: EXPLOSIVES

BOLTS, see: BEAMS & FRAMES
see also: PRODUCTS

BONDS, see project in question
see also: ECONOMY
LEGISLATION & FINANCE (State)

BOOK REVIEWS
Cities, a Scientific American book. p142 ... Jan 27
Urban Design: The Architecture of Towns and Cities by Paul D. Spreiregen. p142 ... Jan 27
Reinforced-Concrete Design Handbook, Working Stress Method reported by ACI Committee. p142 ... Jan 27
Commentary on Building Code Requirements for Reinforced Concrete, report of ACI Committee. p142 ... Jan 27
Analytical Writing, by Thomas P. Johnson. p44 ... Feb 3
Plumbing-Heating-Cooling Contractors publishes manual for cost estimating. B p57 ... Feb 10
Steel Space Structures, by Z. S. Makowski. p268 ... Mar 17
Roofs of the Future, by American Institute of Steel Construction. p269 ... Mar 17
Guidelines for Practical and Realistic Specifications, by Highway Research Board. p190 ... May 26
Highway Capacity Manual, by Highway Research Board. p190 ... May 26
Control of Shrinkage of Concrete, by Committee on Shrinkage of Concrete. p190 ... May 26
Building Cost and Specification Digest, by William H. Edgerton. p261 ... Jun 16
Theory and Practice of Reinforced Concrete, by Clarence W. Dunham. p261 ... Jun 16
Computer Methods in Solid Mechanics, by Joseph J. Gennaro. p261 ... Jun 16
Construction Scheduling and Control, by George E. Deatherage. p262 ... Jun 16
Emerging Techniques of Architectural Practice, by the Department of Architectural Engineering, Penn State University. p262 ... Jun 16

BREAKWATERS, see: PORTS AND HARBORS; DAMS

BRICKS, TILES, MASONRY, see also: PRODUCTS
Engineered Brick Masonry code to be approved. CW p11 ... Mar 10
Structural Clay Products Institute gets federal funds for training bricklayers. p70 ... Jun 9

BRIDGE DESIGN
Box girders conquer the Rhine,*. diag. p61 ... Feb 17
Short span pioneering due, diags,*. p25 ... Feb 24
Minnesota foresters turn flatcars into logging road bridges. p32 ... Mar 3
Early orthotropic plate design,*. RC p6 ... Mar 10
Creativity in bridge designing. e p96 ... Mar 10
Steel girders support new covered bridge in Illinois,*. diag. p191 ... Mar 17
Corrections on short-span bridge design story made by Prestressed Concrete Institute. RC p16 ... Apr 7
Orthotropic design-floating span-steel barge: contributions to design. RC p16 ... Apr 7
Consulting engineer blends steel and prestressed concrete for Nooksack River Bridge, Washington,*, diags. p126 ... Apr 7
Third U.S. orthotropic bridge to link San Diego and Coronado. p18 ... Apr 21
Suspension bridge over Narragansett Bay to have prefab draped strands,*. p20 ... Apr 28
Welded studs skidproof bridge decks,*. p39 ... Jun 2
Orthotropic Calif bridge is a fabricator's dream,**. p22 ... Jun 23

BRIDGES
1966 plans for tollroads and toll bridges- p76 ... Apr 7
Bridge costs in 44 states. p102 ... Jun 16

• American

California
Deadline for decision on Golden Gate approaches. CW p7 ... Jan 6
Route proposed for new San Francisco Bay crossing. CW p47 ... Feb 10
San Diego and Coronado to get orthotropic span, nation's third. p18 ... Apr 21
Golden Gate second deck wins a round, diag. p19 ... Jun 2
San Mateo-Hayward Bridge: a fabricator's dream,**. p22 ... Jun 23

Connecticut
Tallamy's plans for Long Island Sound crossing, map. p69 ... Jan 27

Delaware
Five steel bridges unitprices. p123 ... Feb 17
Delaware River Bridge form collapse kills two,*. p18 ... Apr 14
Formwork adequacy debated in fatal accident on second Delaware Memorial Bridge job. p20 ... Apr 28

Georgia
Atlanta steel truss span destroyed by fire,*. p19 ... Apr 28

Illinois
Chicago viaduct span slips its bearings, jacks on bent raise it again,*. p15 ... Mar 3
Steel girders support new covered bridge, Lake of the Wood Park,*, diag. p191 ... Mar 17
Chicago viaduct slippage explained. p78 ... Apr 7

Louisiana
Overpasses reconstruction unit prices. p147 ... Jan 27
State Route 1 bridge unit prices. p158 ... Mar 17

Maryland
State tries again for a second Chesapeake Bay Bridge. CW p7 ... Feb 3
Baltimore beltway bridges unit prices. p35 ... Mar 31
Continued fight over second Chesapeake Bay Bridge near Annapolis. CW p7 ... Mar 31
Twin to Chesapeake Bay Bridge faces referendum. p80 ... Jun 16

Michigan
Wide bridge spans the Rouge River, Detroit,**. diag. p26 ... Jan 20

Minnesota
Flatcars make logging road bridges. p32 ... Mar 3

Missouri
*Superstructure rises on Poplar Street Bridge, St. Louis. p83 ... Feb 10
Poplar St. Bridge, St. Louis, deck knocked awry by barges. p25 ... Feb 17
Poplar Street Bridge, St. Louis: dislodged girders are safely repositioned,*. p18 ... Apr 14
St. Louis's Poplar Street Bridge: too high bid begets another. p300 ... Jun 16

New Jersey
Freighter smashes Raritan River rail bridge span,*. p19 ... Mar 10
Smashed swing span over Raritan River lifted for repairs,**. p30 ... Apr 28

New York
Tallamy's plans for Long Island Sound crossing, map. p69 ... Jan 27
Gov. Rockefeller denies Long Island Sound bridge plans. CW p19 ... Feb 17
Second St. Lawrence River Bridge planned north of Watertown. B p26 ... May 12

Ohio
Feasibility study for 75-mile bridge, Lake Erie. CW p17 ... Jan 13
Edison Bridge near Milan plunged in darkness B p25 ... Jan 20
*Sandusky Bay bridge and causeway. p90 ... Feb 10
Cracking columns afflict Cleveland hwy viaduct. p78 ... Jun 16

Oregon
New covered bridge near Scio,*. p156 ... May 26

Rhode Island
Special cables to be used for Narragansett Bay Bridge. CW p7 ... Feb 3
Bridge to be built between Providence and E. Providence. B p30 ... Feb 17
Newport-Jamestown bridge bids postponed CW p11 ... Mar 24
Newport-Jamestown bridge over Narragansett Bay awarded to Bethlehem Steel,*. p20 ... Apr 28

Virginia
Old swing to be replaced by lift bridge. B p19 ... Feb 24

Washington
Chelan County bridge over the Wenatchee combines concreting techniques,**. p125 ... Apr 7
Nooksack River Bridge girders blend steel and prestressed concrete,*. diags. p126 ... Apr 7
Spokane bridge unit prices. p63 ... May 19
Feasibility study for bridge across Puget Sound. CW p67 ... May 26

• Foreign
Afghanistan's hand labor builds arch bridge in 2 months,*. p28 ... Mar 24
Africa: Bridge over Niger River in Niamey,*. p37 ... Jan 20
Africa: Nigeria opens East-West bridge,*. p115 ... Apr 7
Australia: Stayed span set for Melbourne,*. p105 ... Apr 7
Brazil to study Guanabara Bay crossing between Rio de Janeiro and Niteroi. CW p67 ... Jun 16
Czechs cantilever record hinged arch near Prague,*. p33 ... Mar 24
Denmark builds bridge to Fyn Island, fifth longest in Europe,*. diag. p116 ... Apr 7
Germany: Zoo bridge at Cologne: big girders conquer the Rhine,*. diag. p61 ... Feb 17
India opens two-mile bridge over River Son, longest in Asia. B p78 ... Apr 7
India builds vital rail bridge over Krishna River at Vijayawada,*. p153 ... Jun 16
Japan: Preliminary surveys for longest suspension bridge in the Orient. B p27 ... Jan 13
Japan: 900-mile hwy plan approved, map. p37 ... Jan 20
Japan: Floating drill platform tilts into position to build Akashi Strait crossing,*. diag. p98 ... Jan 27
Japan: Tokyo squeezes in a viaduct,*. p105 ... Apr 7
Japan: floating crane erects bridge at Kobe,**. p131 ... May 26
New Zealand: Haast River Bridge is longest of 56 built on 1200 mile road,**. p108 ... Apr 7
New Zealand: New wings will widen Auckland harbor bridge,*. diag. p37 ... Apr 21
Turkey plans suspension bridge across the Bosporus. B p25 ... Mar 10

BUDGET, see: CONGRESS, CONSTRUCTION BUSINESS
see also subject, eg. SPACE, WATER RESOURCES

BUILDINGS CODES AND LAWS, INSPECTION
see also: CITIES; ZONING SPECIFICATIONS & STANDARDS
Chicago building code amendment to redefine combustible materials. p25 ... Jan 6
Urban Renewal Administration to help enforce building, housing codes. B p25 ... Jan 6
Construction inspection – still the weak link. RC's p6 ... Jan 13
San Francisco building code to be broken for St. Mary's Cathedral. CW p17 ... Jan 13
Trade groups mobilize against national building code threat. p22 ... Jan 13
National bldg code urged by federal, state and local governments study group. p14 ... Jan 20
Fire code consultants? RC p16 ... Jan 27
Licensing of building inspectors. p68 ... Feb 3
Seismic warning in South Calif. affects building code. CW p19 ... Feb 17
American Standard Safety Code for Elevators, Dumbwaiters, Escalators & Moving Walks revised. B p30 ... Feb 17
Los Angeles changes height limit for reinforced concrete structures. CW p7 ... Mar 3
Tampa building code changes loom from brick facing failure. CW p7 ... Mar 3
Engineered Brick Masonry code to be approved. CW p11 ... Mar 10
Index card system of code approved products. p19 ... Mar 10
A gambler speaks on vigorous inspection standards. RCs p42 ... Mar 17
Building inspectors should be licensed. RC p6 ... Mar 24
Bldg conference in Cleveland: performance standards posed as cure for "Or equal" clause in specs. p14 ... Mar 31
Housing and Urban Development Secretary to go slow on national building code. WO p9 ... Mar 31
Another wall facing failure in Tampa may affect building code. B p78 ... Apr 7
National code confusion e p100 ... Apr 28
nelists disagree on national bldg code need. p24 ... Apr 28
ne points on building codes. RCs p33 ... May 26
olden mean and guidelines in construction inspection and safety measures. RC p16 ... Jun 16

BUILDING DESIGN & COMPONENTS
Architect wrinkles aluminum around Markel Service circular bldg in Richmond, Va,**. diag. p30 ... Jan 6
Homebuilders protest new slab design criteria, map, diag. p32 ... Jan 6
Buffalo bank, built by Minoru Yamasaki, stands on steel arches,*. p26 ... Jan 13
Massive columns keynote Puerto Rico's tallest bldg,**. p40 ... Jan 13
Many roof levels will be playgrounds for United Nations school cantilevering over East River,*. p15 ... Jan 20
New buildings in Sydney, Australia,**. p32 ... Jan 20
Laboratory for life science designed to defy time,**. diag. p78 ... Jan 27
Slipforms on lift-slab erection of Utah apartment bldg,*. p112 ... Jan 27
Building revolution gains new momentum; annual review,**. p100 ... Feb 10
Floor collapse of loft bldg. in Hell's Hundred Acres, NYC, followed failure at column bracket,*. p17 Feb 3; p18 ... Feb 24
Tokyo to build Trade Center, Asia's tallest bldg,*. p33 ... Feb 24
Hang up framing for Belgian office bldg,**. p42 ... Mar 10
and correction RC p33 ... Apr 7
Manhattan bldg leans to skirt zoning law,*. p20 ... Mar 10
Plywood system hut replaces air supported plastic housing high voltage test center in Dalles, Ore,*. p200 ... Mar 17
Speedy construction of large area bldgs through automated CENO space frame system,*. p36 ... Mar 24
Paris to build ultramodern balconied office,*. p29 ... Mar 31
Rubber sheet smoothes concrete ceiling at Radcliffe College Library,*. diag. p122 ... Jan 27
New designs for glass houses fight desert sun,**. diag. p20 ... Apr 7
Hexagonal pods make Wilmington's school, Del.,*. diag. p29 ... Apr 14
European bearing wall system enters U.S. housing market,**. p24 ... Apr 14
Warehouse to be built on air rights over Penna tracks, NYC west side,*. p18 ... Apr 21
Steel frame for high rise apartment use, diag. p19 ... Apr 21
Diamond shaped outer steel frame for Alcoa Bldg, San Francisco,**. p22 ... Apr 21
Demolition tests at World's Fair use new techniques,*. p20 ... May 5
Tallest reinforced concrete frame for Shell Oil, Houston. p20 ... Apr 28
Famous bldg heights compared with St. Louis Gateway Arch,*. p158 ... May 26
Wide flange tees form walls and roof for longest span warehouse,**. p106 ... May 26
New concepts in culture center design,**. p94 ... May 26
9-acre factory built in 53 days,**. p14 ... Jun 2
Contest for designers of federally assisted building projects. B p21 ... Jun 9
Johannesburg bank hangs from concrete girders,*. p158 ... Jun 16
Wind tunnel will test scale models of buildings. p170 ... Jun 16
Scientific Data Systems plant, El Segundo, Calif: economical design leaves columns out,*. p175 ... Jun 16
Montreal's Habitat 67: designing the good life. p84 & e p324 ... Jun 16
Tallest reinforced concrete building of 80 stories planned for Chicago. CW p11 ... Jun 23

• Ceilings and Floors
Rubber sheet smoothes concrete ceiling at Radcliffe College Library,*, diag. p122 ... Jan 27
High and dry apartment buildings floor system, diag. p19 ... Apr 21
Plastic sheets stretch out to make Swedish ceilings,**. p135 ... May 26

(Continued)

(Continued)

• Doors and Windows
Norfolk, Va. Civic Center windows answer problem of glare and view. p80 ... Apr 7
• Elevators, Stairs
Reusable stairs provide temporary out in Tulsa, Okla.,*. p81 ... Feb 17
Fastest elevators for Chicago's John Hancock Bldg.,*. p21 ... May 12
• Prefabs, Standardized systems
University of California seeks dormitory construction similar to school Systems Development p15 ... Feb 3
Systems Development speeds Lockheed Georgia plant job.*. p55 ... Feb 10
Systems Development: a pressure on productivity e p164 ... Feb 10
Compatible Design Systems is a new firm offering steel components for School Construction Systems Development CW p11 ... Apr 14
Building systems: now or later ? BRI meeting discussion p26 ... May 19
Question of primacy on school building systems. RC p4 ... Jun 23
Prefab units make 3 bedroom home in 4 hours,*. p34 ... Jun 30
Techniques and Trends
Building revolution gains momentum. p100 ... Feb 10

BUILDINGS, see also: ACCIDENTS & FAILURES, CITIES, HOUSING

• Apartments, Hotels, Restaurants
Philadelphia apartment bldg owner sues architect for $7m p15 ... Jan 20
Slipforms on lift-slab erection of Utah apartment bldg.*. p112 ... Jan 27
Mies designs apartment bldgs for Montreal.*. p56 ... Feb 10
Libel suit follows Four Seasons apartment collapse in Alaska earthquake. p56 ... Feb 10
Trend to apartment living reported by Regional Planning asso. e p88 ... Feb 24
Cost of New York high rise apartments p126 ... Mar 17
European bearing wall system enters U.S. housing market.**. p24 ... Apr 14
Steel frame for high rise apartment use. diag. p19 ... Apr 21
Stainless steel liners ease slipforming for San Fran apartment tower**. p24 ... May 5
15,000 co-op unit to start in Bronx, N.Y. B p79 ... May 26
Proper identification for San Francisco apartment builders. RC p40 ... Jun 16
Montreal's Habitat 67 is a city in the sky,**. 1966 p84 & e p324 ... Jun 16
Reinforced concrete apartment building to be Chicago's tallest. CW p11 ... Jun 23
• Churches
St. Mary's Cathedral, San Francisco, to break building code height limit. CW p17 Jan 13 & B p79 ... May 26
Armenian cathedral in NYC: steel subs for ancient masonry**. p32 ... Jun 23
• Culture, Entertainment, Monuments, Meetings, Sports
Nervi to design Norfolk, Va. cultural center. B p25 ... Jan 6
Philadelphia rejects rectangular sports stadium,*. p23 ... Jan 13
Bronx zoo building for night animals.*. p14 ... Jan 20
Controversial opera house job drags on in Sydney, Australia.*. p32 ... Jan 20
Gateway Arch job in St. Louis is an equal employment opportunity test case. CW p61 ... Jan 27
Domed stadiums "on the mark".*. p68 ... Jan 27
Ultrasonic weld used at Angels Stadium in Anaheim.**. p26 ... Feb 3
Bonds for San Diego stadium. B p57 ... Feb 10
*Art Museum, Los Angeles County. p105 ... Feb 10
Cables support ten acre roof for Tulsa exposition center.*. p37 ... Feb 17
Culture bowl to be built by N.J. Hwy Authority.*. p30 ... Feb 17
H.A. Stubbins Jr. becomes architect for Philadelphia stadium. p25 ... Mar 10
Danish architect refuses to serve on Sydney Opera House after 10 years. CW p11 ... Mar 10
$3m repairs needed on Houston stadium. CW p11 ... Mar 10
Cinema Center to be built on Madison Square Garden site, New York City.*. p83 ... Mar 17
Suit filed against D.C. Stadium constructors for poor quality materials. CW p11 ... Mar 24
CENO space frame system for quick erection of Vienna exhibition hall.*. p36 ... Mar 24
AIA sponsors theater architecture exhibit. B p78 ... Apr 7
Madison Square Garden, NYC: crane goes to work 45 ft up.*. p138 ... Apr 7
Tokyo theater has ribbed face walls.*. p115 ... Apr 7
Albuquerque arena spanned by sheet steel roof.*, diag. p22 ... Apr 14
New Metropolitan Opera in Lincoln Center: trial performance acoustics are good. CW p11 ... Apr 21
New Cotton Bowl proposed for Dallas,*. p19 ... May 5
New concepts in culture center design,**. p94 ... May 26
Disappearing soundproof partitions for Webster College theater,*. diag. p127 ... May 26
St. Louis Gateway Arch height compared with famous high landmarks.*. p158 ... May 26
Swimming pool made of old sewage plant in McLean, Va.*. p101 ... May 26
Abu Simbel Temples now safe, 1200 pieces wait for re-assembly.**. diag. p26 ... Jun 2
Pasadena, Calif. high school gym: ribbed deck forms radial roof.*. p23 ... Jun 9
Madison Square Garden, NYC: space gain solves uplift problem in big cable roof**. diag. p26 ... Jun 9
More credits for Webster College Center of Performing Arts. RC p40 ... Jun 16
Thin dome roofs Hicksville, N.Y., skating rink,**. p22 ... Jun 30

• Federal, Municipal, State
GSA to put engineers name on new federal bldgs jobs. WO p49 ... Feb 10
New mint in Philadelphia designed for heavy load,*. p17 ... Feb 24
"Little Pentagon" to be designed by same team as World Trade Center. CW p9 ... Feb 24
Seattle court house job tops estimate by 180%.*. p69 ... Feb 24
Rock bolts anchor slab against uplift, Penna state office in Harrisburg.*. p37 ... Mar 10
South Mall building complex in Albany to start. CW p11 ... Mar 24
Paris to build balconied office for Dept of Education,*. p29 ... Mar 31
No bids for U.S. Mint building in Philadelphia. CW p67 ... Apr 7
GSA cancels some Midwest bldg projects. p16 ... Apr 14
County courthouse, Washington, collapse threat. p83 ... May 19
County court house, Washington, is in no danger of collapse. CW p11 ... Jun 9
GSA to go on with Chicago federal bldg. plans. p18 ... Jun 9
Contest for designers of federally assisted building projects. B p21 ... Jun 9
U.S. Capitol expansion approved. CW p11 ... Jun 23
Fine Arts Commission protests expansion of Capitol's west front. CW p7 ... Jun 30
• Garages, Service stations
High bids for Lansing, Michigan parking ramps. B p21 ... Mar 24
Plastic domes roof Florida gas stations.*. p132 ... Apr 7
Univ of Mich precast garage columns tumble in wind. p21 ... Jun 2
• Hangars
Hangar planned for super jets in Oakland. B p57 ... Feb 10
Jacked roof halves hangar cost in Glasgow, Scotland.*. p32 ... Apr 14
• Homes
CPM speeds Seabee homebuilding in Rota, Spain.*. p121 ... Jan 27
Prefab units make 3 bedroom home in 4 hours,*. p34 ... Jun 30
• Hospitals
Massive aid to hospitals to start. p17 ... Mar 10
St. Agnes Hospital, Philadelphia, to have rooftop heliport. B p21 ... Mar 24
Religious issue stalls bond sales for Ohio hospital. p44 ... Mar 31
Ohio church operated hospital bonds cleared by court. p81 ... Apr 28
More nursing homes needed, as Medicare system starts. WO p17 ... May 12
Hill-Burton funds frozen by anti-inflation move. CW p15 ... May 12
Penna hospital: glass insulation doubles as roof deck.*. p150 ... May 26
Larger hospitals cost more per sq ft. table. p112 ... Jun 16
• Industrial plants
Systems Development speeds Lockheed Georgia plant job.*. p55 ... Feb 10
Industrial plant planning jumped 35% in 1965, table. p70 ... Feb 10
Geodesic dome for Carborundum plant in Niagara Falls.*. p26 ... Feb 17
Mexico City factory has easy to dismantle H-P roof.*. p68 ... Feb 17
Beauty of industrial buildings. RC p48 ... Mar 17
Avco Corp. factory in S.C. built in 53 days, covers 9 acres,**. p14 ... Jun 2
Economical Calif plant design leaves columns out,*. p174 ... Jun 16
• Laboratories, Libraries, Communications, Research
Salk Institute lab in La Jolla, Cal. to defy time,**. diags. p78 ... Jan 27
Rubber sheet smooths concrete ceiling at Radcliffe College Library.*. diag. p122 ... Jan 27
Washington D.C. library designed by Mies van der Rohe.*. p16 ... Mar 3
Quickly built plywood hut for high voltage test center in Dalles, Ore.*. p200 ... Mar 17
Desert architecture for Univ. of Nevada Research Institute. p85 ... Apr 7
Tornadoes studied in Catholic Univ of America lab. p21 ... Apr 14
Berkeley's Engineering Materials Lab named for famous retired professor. B p79 ... May 26
Medical research bldg, NYC: basement slab tied down to counter hydraulic uplift.*. p181 ... Jun 16
Corps of Engineers to build and lease college labs for its own projects. p12 ... Jun 30
• Offices
Architect wrinkles aluminum around Markel Service circular bldg in Richmond, Va.**. diag. p30 ... Jan 6
Buffalo bank stands on steel arches.*. p26 ... Jan 13
Banco Popular in San Juan is tallest bldg in Puerto Rico.**. p40 ... Jan 13
Sophisticated office for Naugatuck contractor, Conn.*. p25 ... Jan 20
U.S. Steel new HQ to be Pittsburgh's tallest bldg. CW p61 ... Jan 27
50-story bank in Seattle has only 4 exterior columns. CW p7 ... Feb 3
High-relief concrete panels embellish Bell Telephone's headquarters in N.J.**. diagrams. p28 ... Feb 3
Roll-out forms speed hexagonal office tower in Oklahoma City.**. p37 ... Feb 3
Mies designs office bldg for Montreal.*. p56 ... Feb 10
*Hancock Center, Chicago. p101 ... Feb 10
*Lincoln Income Life Insurance Bldg., Louisville. p101 ... Feb 10
*Lake Point Tower, Chicago. p110 ... Feb 10
*Allied Chemical Tower, New York. p111 ... Feb 10
Difficult foundation completed for NYC office over rail tracks.*. p28 ... Feb 17
Addition to Bell Telephone office in Tulsa, Okla; temporary reusable stairs,*. p81 ... Feb 17
Tampa bank's facing bulges out.*. p15 ... Feb 24
Bank of Calif in San Francisco: steel comes first, bole is last in upside down tower foundation.**. p22 ... Feb 24
Tokyo to build trade center.*. p33 ... Feb 24
PNYA names Tishman Co. consultants on World Trade Center. p15 ... Mar 3
PNYA's plan: contractor-consultant on World Trade Center. e p68 ... Mar 3
Hang up framing for Berlaymont office, Brussels,**. p42 ... Mar 10
and correction RC p33 ... Apr 7
National Maritime Union, NYC: bldg leans to skirt zoning law.*. p20 ... Mar 10
Koso tower, Tokyo, to be 36 stories high.*. p183 ... Mar 17
New bank bldg in Manhattan will have vest pocket park. p21 ... Mar 24
NYC Trade Center ready to start.*. p17 ... Mar 24
Lift slab roof for Missouri Savings office at Clayton.**. p24 ... Mar 24
General Motors office near Mesa, Ariz. has sophisticated window wall heating heat and light.*, diag. p80 ... Apr 7
Egg-crates in Asia: window designs for American offices.*. p85 ... Apr 7
Alcoa Bldg, San Francisco, has diamond shaped intricate outer fram.**. p22 ... Apr 21
Shell Oil will be Houston's tallest, also tallest frame ever in reinforced concrete. p20 ... Apr 28
Chicago's John Hancock Center will have fastest elevators.*. p21 ... May 12
Los Angeles plans 42 story bank.*. p27 ... May 19
Office bldg in Holland grows up on jackblocks,*. p154 ... May 26
British Petroleum, London's tallest bldg, topped out,*. p136 ... May 26
South Africa: Johannesburg bank hangs from concrete girders,*. p158 ... Jun 16
• Schools
United Nations school for 1000 pupils to cantilever over East River.*. p15 ... Jan 20
University of California seeks dormitory construction similar to school Systems Development. p15 ... Feb 3
Tokyo Trade Center to be tallest bldg in Asia.*. p33 ... Feb 24
British liner to be used as college dormitory in Holland. B p18 ... Feb 3
Good bldgs needed for dental schools. WO p13 ... Mar 10
Cost of new schools in the U.S. p102 ... Mar 17
Univ of Chicago job is still a bid price headache. p306 ... Mar 17
Michigan officials sue school bond opponents. p12 ... Mar 31
PNYA retains contractor-consultant for World Trade Center job. RC p33 ... Apr 7
No punitive damages on Michigan school plans court case. p78 ... Apr 7
Contract system is a snag for two university jobs. p81 ... Apr 14
Tomorrow's schools: clusters in pods tried in Wilmington, Del.*. p29 ... Apr 14
Cubistic bldgs for Philadelphia College of Art.*. p21 ... Apr 14
University of California to spend almost 200m on construction. CW p67 ... May 26
New school designs solve money and space problems,**. p13 ... Jun 2
Wind gusts fell Pittsburgh's university bldg steel frame.*. p18 ... Jun 9
More schools needed in New York City. CW p11 ... Jun 9
Coordinated complexes expand the University of Tennessee,**, map. p26 ... Jun 30
• Shops, Shopping centers
Helicopter exchanges damaged panel in Phila shopping center.*. p20 ... Mar 10
Atlanta's Greenbrier Shopping Center has plastic canopy over mall.*, diags. p22 ... Mar 24
Vienna candle shop wins aluminum award.*. p34 ... Jun 2
• Storage, Silos, Warehouses, Tanks
McGraw-Hill's California book warehouse has H-P roof.**. p109 ... Jan 27
Surcharging big floor saves PNYA $1m on Port Newark warehouse job.**. p22 ... Mar 3
Silos for highway salt built in Virginia. B p25 ... Mar 10
Slope sided warehouse to stand over rail tracks on Manhattan's west side.*. p18 ... Apr 21
A-framed terminal and warehouse at Port Moody, B.C.*. p140 ... May 26
Wilmington, Mass., warehouse: wide flange precast tees form walls and roof.**, diags. p106 ... May 26
• Terminals
New terminal at Helsinki airport.*. p57 ... Feb 17
Chicago to build bus terminal. B p19 ... Feb 24
Oval airport terminal planned at Pittsburgh. p22 ... May 12
Terminals in the round at Detroit Airport.*. p120 ... May 26
• Towers
Restaurant, TV tower top concrete tripod in Belgrade.*. p72 ... Feb 17
Steel tower in Brasilia, Brazil,*. p33 ... Feb 24
British cooling tower failure is a puzzle. p28 ... Mar 3
World's third highest TV tower in Roswell, N.M., toppled by wind. p19 ... Apr 14
Tall tower in London links British phones.*. p37 ... Apr 28
First FAA prefab cab to top air traffic tower.*. p39 ... Jun 2

BUREAU OF PUBLIC ROADS, see: HIGHWAYS

BUREAU OF RECLAMATION, see: SOIL; WATER RESOURCES

C

CABLES, WIRE
see also: PRODUCTS
Prefabricated, draped-cable strands and plastic cable wrapping to be used on Rhode Island bridge. CW p7 ... Feb 3

CAISSONS, COFFERDAMS, see: BRIDGES; DAMS; SOIL

CANALS, CHANNELS
Mexico and U.S. to divert Rio Grande's salty runoff. B p27 ... Jan 13
Cross Florida Barge Canal: contractors slosh in from each end, **, map. p86 ... Jan 27
Mexico considers 400-mile intercoastal waterway from Matamoros to Nautla. B p30 ... Feb 17
Panama Canal: plans for nuclear excavation continue. WO p79 ... Mar 17
California canal settling basin unit prices. p168 ... Mar 17
Albuquerque flood control diversion channel unit prices. p58 ... Apr 14
Japan plans a 70-mile canal through island of Honshu. CW p67 ... May 26
St. Lawrence Seaway Authority plans new Welland canal. B p21 ... Jun 9
Spain's Bonanza-Seville canal to be built by Franco-American enterprise, map. p76 ... Jun 16

CAPITAL SPENDING, see: ECONOMY
see also: BUILDINGS, • Industrial Plants; EQUIPMENT

CAUSEWAYS, see: BRIDGES

CITIES. see also: BUILDING CODES; HOUSING; ZONING
Hydropolis: dams should become communities. B p25 ... Jan 6
Urban Renewal Administration to help enforce building, housing codes. B p25 ... Jan 6
City without subways: thoughts for planners. e p84 ... Jan 20
Leaders on the urban frontier. e p84 ... Jan 20
Federal cash to help cities. p16 ... Feb 3
First International Conference on Urban Transportation meets in Pittsburgh. p51 ... Feb 10
Complexities of urban transportation planning. e p164 ... Feb 10
Urban mass transit: a boost and a threat. e p164 ... Feb 10
Onward and upward – report of New York Regional Plan Asso. e p88 ... Feb 24
How major cities view storm water control,**, diag. p24 ... Mar 31
City mayors courted by Dept of Interior. WO p69 ... Apr 7
"Demonstration cities" program too small. WO 69 ... Apr 7
City problems can't wait, in spite of anti inflation appeals. WO p69 ... Apr 7
Neighborhood parks to replace private backyards in renovated slum. diag. p20 ... Apr 21
Some cities still have headaches, but urban interstate work perks up. table. p15 ... Apr 28
Urban expressways. e p84 ... May 12
Urban transit gets double boost. p20 ... May 12
What cities do with their garbage p25 ... May 19
New park building program. WO p8 ... Jun 2
White House wants new cities program now. WO p13 ... Jun 23
Urban Renewal Administration urged to enforce storm and sanitary sewer separation. p12 ... Jun 30
"Demonstration cities" still left intact. o16 ... Jun 30

Albany, New York
South Mall $480m project – contracts to be awarded. CW p11 ... Mar 24
G.A. Fuller to be consultants on South Mall project. B p21 ... Jun 9

Albuquerque, N.M.
Fights flash floods,*, map. p109 ... May 26

Birmingham, Ala.
Invites architects to compete on civic center. p16 ... Jun 30

Bogota, Colombia
Eucharistic Congress in 1968 would mean giant construction jobs. B p21 ... Jun 9

Chicago, Ill.
Five year capital improvements program. p48 ... Jan 6
Pre-apprentice program to help Negroes. p57 ... Jan 6
Transit Authority plans rail extensions on highway median. B p27 ... May 12
Charges of cheating in civil service examinations of the Metropolitan Sanitary District. CW p7 ... Jun 2
Fraud charged in Sanitary District job examinations. p20 ... Jun 9

Cleveland, Ohio
City sues over sinking Lakeland Ave. p26 ... Apr 28
Urban renewal gets legal aid. p21 ... Jun 9

Coblenz, Europe
German city on the Rhine is not Swiss town on the Aare. RC p71 ... Mar 17

Detroit, Mich.
May try elevated tubes carrying small transit cars,*. p39 ... Mar 24
Transportation authority studied. p16 ... Mar 31
Planners of elevated transport should check their arithmetic. RC p16 ... Apr 28
Bus shelters to lure commuters into city transport **. p20 ... Jun 9

Duluth, Minn
Difficult expressway construction,**. p26 ... May 5

Helsinki, Finland
Wall of piles holds out water for big multipurpose bldg foundations,*. p101 ... Jan 27
Letter from Helsinki: Saarinen's satellites still shine, Aalto's city center includes the auto,**, maps. p54 ... Feb 17

Houston, Texas
Approves water project, Livingston Dam to be built. p15 ... Feb 24

Istanbul, Turkey
Ancient city has water problem,**. p30 ... Apr 21

Knoxville, Tenn
Urban renewal permits University to add 135 acres to campus,**, map. p26 ... Jun 30

Kobe Harbor, Japan
Plans for artificial island. B p19 ... Feb 24

Los Angeles, Cal
Starts $750m 5-year water and power project. p13 ... Jan 20
Transit vote looms. p70 ... Feb 24
Changes height limit for reinforced concrete structures. CW p7 ... Mar 3
Gets access to funds for rail transit. p231 ... May 26
County to levy taxes for rapid transit system. CW p11 ... Jun 9

Milwaukee, Wis
Festival and parade for the construction industry,**. p24 ... May 12

Montreal, Canada
Mies designs high income enclave,*. p56 ... Feb 10
Habitat 67 is a city in the sky,**. Cover, p84, e p324 ... Jun 16

Newport News, Virginia
New land created by filling behind ship split to make jetty,*. p163 ... May 26

New York, N.Y.
Plans for transport consolidation. B p25 ... Jan 6
City without subways. e p84 ... Jan 20
Cinema Center to be built on Madison Square Garden site,*. p83 ... Mar 17
Politics and planning: Lindsay vs Moses on transportation. e p326 ... Mar 17
Will get vest-pocket park around new bank bldg. p21 ... Mar 24
World's Fair demolition tests use new techniques,*. p20 ... May 5
Towers planned where piers rot: filled land along Hudson River, map. p27 ... May 19
New York area transit plan lists hwy and rail goals, map. p79 ... May 26
Mayor Lindsay approves downtown civic center plans. CW p67 ... Jun 16
Lower Manhattan plan proposes marinas and pedestrian plazas,*. p13 ... Jun 30

Paris, France
War on slums in 3 centers: Pont de Seine, Defense, Maine-Montparnasse,**. p40 ... Jun 9

Philadelphia, Pa
Housing rehabilitation ideas stumble. p207 ... Apr 7
Vague purpose puts bond proposal in litigation. p78 ... Apr 21
City officials frustrated by surfeit of money. CW p67 ... Jun 16
Record price for land: $850 per sq ft. CW p7 ... Jun 30

Pittsburgh, Pa
Business plaza planned to rival Golden Triangle. CW p19 ... Feb 17
Penn Park, huge renewal plan*. p22 ... May 12

Reston, Va
Premier new town dedicated. e p252 ... May 26

Rio de Janeiro, Brazil
Difficulty in eliminating sand in Guanabara Water Project,**, diags. p98 ... Apr 7

St. Louis, Mo.
Neighborhood parks to replace private backyards, diag. p20 ... Apr 21
Architectural competition for Gateway Mall. B p28 ... Apr 28

Salem, Oregon
$65m highway plan recommended for capital. B p19 ... Feb 24

San Francisco, Cal
Bay Area Transit to announce tunnel and Oakland subway job. CW p7 ... Jan 6
Bay Area Rapid Transit to decide on Oakland, Calif, subway bid. CW p7 ... Jan 20
Wasted water produces hydro power. p72 ... Jan 27
BARDT undecided on subway award. p15 ... Feb 3
Get on with it, BARDT. e p68 ... Feb 3
BARTD rejects Oakland subway bid. p27 ... Feb 17
BARTD breaks Oakland subway project into 4 contracts. B p7 ... Mar 3
BARTD's bidding, legal, financial problems. e p68 ... Mar 3
BARTD awards San Francisco tunnel contract to Peter Kiewit Sons' Co. CW p11 ... Mar 10
BARTD wins qualified vote of confidence. CW p7 ... Mar 17
BARTD's problems. RC p4 ... Mar 31
BARTD consultants did estimate everything but inflation. RC p33 ... Apr 7
Developers selected for office complex to complete Golden Gate project. CW p67 ... Apr 7
Work starts on sunken tube tunnel sections. B p78 ... Apr 7
BARTD will build subway station cheaper upside down. p77 ... Apr 7
BARTD ready to try again for subway bids. e p100 ... Apr 14
BARTD system designed to roll with earthquake punches,**, map, diags. p24 ... Apr 21
Municipal Railway System to be integrated with Bay Area Transit. CW p11 ... May 5
Yerba Buena Center redevelopment project approved. B p27 ... May 12
BARDT elevated structures unit prices. p49 ... Jun 9

Stockholm, Sweden
City to purchase 1,600 acres of state-owned land. B p27 ... Jan 13

Sydney, Australia
Letter from Sydney: city with a brand new face,**. p32 ... Jan 20

Tama Hills, Japan
Claims to be world's largest new town B p19 ... Feb 24

Tampa, Fla.
Building code to be affected by brick facing failure. CW p7 ... Mar 3

Teheran, Iran
Victor Gruen to work on master plan. B p21 ... Apr 21

Tokyo, Japan
Commuter rail loop to run to Boso Peninsula. B p25 ... Jan 20
Leaps over height limit,*. p183 ... Mar 17
Manufacturer's ad disliked; bulldozer on rooftop,*. p168 ... Jun 16

Toronto, Canada
East-west subway opens. B p25 ... Mar 10
Eaton Center planned,*. p15 ... Mar 31

Trinidad City, Trinidad
New city near Port of Spain to cure country's economic woes. p120 ... Apr 7

Washington, D.C.
Jet terminal planned. B p7 ... Mar 3
Chicago architect chosen for transit system design. CW p77 ... Mar 17

CIVIL RIGHTS, see: ETHICS

CIVILIAN INDUSTRY TECHNOLOGY, see: CONSTRUCTION INDUSTRY; RESEARCH AND TESTS

COATINGS, see: ADHESIVES, COATINGS
see also: PRODUCTS

COLUMNS, see: BEAMS & COLUMNS; CONCRETE; STEEL

COMMUNICATIONS, ELECTRONICS, AUTOMATION
see also: PRODUCTS
• Automation, Computers, Electronic devices
Electronic draftsman plot maps. p130 ... Jan 27
Graphic aids translated computer-calculated CPM networks. p30 ... Mar 3
Rapid heatless process for curing paint with electron beams. p208 ... Mar 17
Automation expands CENO space frame usage,*. p36 ... Mar 24
Electronic scale measures wheel loads at high speed *. diag. p143 ... Apr 7
Electronic sensors gage Illinois River conditions p150 ... Apr 7
Cybernetic anthropomorphic machines follow operator's movements,*. p37 ... May 5
California highway district offices to be linked to central computer. B p79 ... May 26
Specifications writers urged to automate p21 ... Jun 2
New computer system, the ICES, to be presented at MIT in July. e p72 ... Jun 2
• Radar, Radio
Canada builds its largest radio telescope,*. p105 ... Jan 27
U.S. builds tracking post in Australia for satellites. p37 ... Apr 21
Design proposals requested for Communications Satellite Corp. station in W. Va. CW p15 ... May 12
Motorola's solid state transceivers. p177 ... May 26
Goldstone antenna in Mojave Desert probes space. p83 ... Jun 16

COMPUTERS, see: COMMUNICATIONS, ELECTRONICS

CONCRETE, see also: PAVING; PRODUCTS
Homebuilders protest new slab design criteria, map, diag. p32 ... Jan 6
Steel research rolls, concrete crawls, ASCE Miami conference finds out. p53 ... Feb 10
Ultasonic testing device eliminates concrete ring. p92 ... Feb 17
Surki mortar (pozzolana) saves money on dams, Sharavati project, India,*. map. p40 ... Mar 10
ACI accepts new standards promising shorter specs,*. p86 ... Mar 17
A.R. Anderson becomes ACI President: low design fees block progress,*. p259 ... Mar 17
For better concrete: new specs, new group. e p88 ... Mar 24
Corrections on short-span bridge design story made by Prestressed Concrete Institute. RC p16 ... Apr 7
Wages push concrete prices up. CW p11 ... Apr 28
• Cement
Portland Cement Asso develops new method: concrete pavements can be thinner,*. graphs, tables. p76 ... Feb 17
Cement imports will not be prohibited. WO p13 ... Jun 9
• Finishing
Rubber sheet smoothes concrete ceiling at Radcliffe College Library,*. diag. p122 ... Jan 27
Silicone coating developed for concrete. p212 ... Mar 17
• Forms
Slipforms on lift-slab erection of Utah apartment bldg,*. p112 ... Jan 27
Roll-out forms speed hexagonal office tower in Oklahoma City,**. p37 ... Feb 3

(Continued)

(Continued)

*Slipforms shape Canadian observation tower. p100 Feb 10
Steel rib cage moves form for elevated Austrian road. * diags. p30 Apr 14
Formwork adequacy debated in fatal accident on second Delaware Memorial Bridge job. p20 Apr 28
Stainless steel liners ease slipforming for San Fran apartment tower.**. p24 May 5
Vienna contractor minimizes falsework for elevated hwy.**. p36 Jun 9

• Lift slab and jackblocks
Lift slab roof for Missouri Savings office at Clayton. **. p24 Mar 24
Office bldg in Holland grows upward on jackblocks. *. p154 May 26

• Precast, Prestressed
Prestressed concrete crossties for St. Louis – San Francisco railway. B p19 Feb 24
Precasters meet in London, see busy days ahead. p16 Jun 2
Prestressed concrete experts favor grouted tendons. p20 Jun 23

• Reinforced
Continuously reinforced concrete paves a mile a day. **. p26 Jan 6
Tallest reinforced concrete frame for Shell Oil, Houston. p20 Apr 28
Tallest reinforced concrete bldg of 80 stories planned for Chicago. CW p11 Jun 23

CONGRESS, FEDERAL ISSUES.
see also: Subject discussed
Outlook for federal bills, table. p24 Jan 13
State of the Union message; construction outlays will rise. p11 Jan 20
Budget allocates $8.9 billion for construction, tables. p65 Jan 27
Federal water projects trimmed by 2%, table. p54 Feb 10
Congress investigates November blackout over Northeastern states. p27 Feb 17
Senate public works switches chairman. WO p9 Mar 3
Congress wants notice on Vietnam construction. WO p13 Mar 10
Situs picketing bill heads for the House. p309 Mar 17
Legislation to beef up Hwy Trust Fund. p12 Mar 31
Labor gives Congress a hot potato. p50 Mar 31
Transportation bill gets cautious approval at hearings. p78 Apr 7
Defense trimming angers congressmen. WO p13 Apr 14
Mood of Congress. WO p13 Apr 28
Congress challenges defense job cuts p233 May 26
Budget deficit lowest in years. WO p9 Jun 2

CONSTRUCTION BUSINESS. see also: ECONOMICS
Better reporting on construction volume, Census Bureau checks activity at jobsite. p25 Mar 10

• Advanced planning
Private industry to keen construction high in 1966; ENR reported planning 1965 table, and Dec '65 table. p11 Jan 6
New construction planning table 1965 p76 Feb 10
New construction planning in February, table. p77 Mar 10
First quarter plans jump 9%, news plans in March p209 Apr 7
Planning rate remains steady, April table. p63 May 5
Hint of change: new planning falls behind last year, graphs. p18 May 5
Private planning up 5%, May table. p67 Jun 9

• Backlog
Backlog of construction planning, table. p81 Feb 18

• Contracts
California the leader in construction 1965 contracts table by states. p72 Feb 10
Construction in Washington State jumps 73% over last year. B p25 Mar 10
Federal contracts are off 20%, graph. p77 May 26

• Costs
First quarterly cost issue Mar 17
Second quarterly cost issue Jun 16
The worst cost inflation yet? p95 Mar 17
Labor and materials shortages are ballooning costs of Construction. p89 Jun 16
Build cost indexes:
General and specific types of bldgs p98
Ten types of bldgs, E.H. Boeckh p101
Electric & gas utilities, Handy-Whitman p112
Refinery and process units, Nelson p113
Industrial Equipment, Marshall & Stevens p114
Bldg equipment, BLS p115 Mar 17
Building cost indexes:
General, industrial bldgs p110
ENR cost indexes p111
Hospitals p112 Jun 16
Heavy construction cost indexes:
Highways p118
Irrigation & Hydro p120
Water plant, Weber Fick & Wilson p124
Sewage treatment plants p125
Sewer lines p125 Mar 17
Heavy construction cost indexes:
Highways p90
Bridges p102
Hydro and irrigation p106
Sewerage p108 Jun 16
The four M's – outlook for Manpower, Materials, Machinery and Money p134 Mar 17
The four M's – p117 Jun 16
ENR wage indexes p134
ENR materials price indexes p134
Iron and steel products and pipe prices p141
Lumber, plywood and glass prices p142 Mar 17
Cost of new schools in the U.S. p102 Mar 17; p113 Jun 16
Where the bldg dollar goes p110 Mar 17; p114 Jun 16
Estimator's work improved through uniform system of work item description. p130 Mar 17

• Forecast
Annual forecast: contracts up 8% in 1966, tables, graphs. p68 Feb 10
Prospects for materials, manpower, failures, machinery and money. p74 Feb 10
No cut in federal construction plans. WO p9 Mar 31
Forecast change: new planning falls behind last year, graphs. p18 May 5

• Foreign
Less foreign aid money for construction. WO p9 Jan 20
South Vietnam's joint venture contractors in search for good short name. CW p7 Jan 20
South-East Asian market seen growing. p163 Jan 27
Food drive means construction in underdeveloped countries? WO p9 Feb 3
Vietnam war puts pressure on equipment manufacturers. CW p7 Feb 3
Construction escalates in Vietnam.**, map. p11 Feb 3
Time and logistics complicate construction in South Vietnam.**, map. p60 Feb 10
Vietnam: new phase means more building. WO p49 Feb 10
Unified construction command in Vietnam. CW p47 Feb 10
Foreign aid to shift from heavy industry to living conditions. p57 Feb 10
Vietnam war slows equipment deliveries.*. p23 Feb 17
Is a renaissance brewing in Russian architecture?*. p26 Mar 3
Congress wants notice on Vietnam construction. WO p13 Mar 10
More construction men for Vietnam. WO p79 Mar 17
Corps of Engineers in Vietnam.**. p81 Mar 17
Italian home construction slow. p184 Mar 17
International loans for Mexico's electricity indicate way for others. p174 Mar 17
Hush-hush Navy construction in Thailand. CW p11 Mar 24
Soviet 5-yr plan recognizes profit. p65 Mar 24
CPM system for Vietnam constructors. CW p67 Apr 7
Civil works – big construction job in Vietnam.** p15 May 5
Foreign Construction Conference planned in Washington CW p15 May 12
Mexico, Venezuela, Burundi, Finland get World Bank credits. p136 May 26
U.S. products to be used by American contractors abroad. WO p13 Jun 9
Armored earthmovers for Vietnam. B p21 Jun 23
Portugal and Jamaica get World Bank loans for electric power. p47 Jun 23
Vietnamese construction workers strike for more pay. CW p7 Jun 30
NATO shift may mean bldg spending for U.S. construction in Europe. p14 Jun 30

• Materials and Labor Prices
Cement, aggregate; concrete; Paving brick, block asphalt, road oils:
p42 Jan 6, p133 Feb 10, p56 Mar 10, p184 Apr 7, p49 May 5, p51 Jun 9
Iron and steel, Pipe and tubing:
p52 Jan 13, p124 Feb 17, p141 Mar 17, p60 Apr 14, p72 May 12, p125 Jun 16
Lumber; Glass; Explosives; Piles; Chemicals:
p51 Jan 20, p47 Feb 24, p142 Mar 17, p59 Apr 21, p64 May 19, p126 Jun 16
Tile, brick, lime; Paint, roofing; Plaster, vermiculite, metal bldg sheets:
p150 Jan 27, p51 Mar 24, p63 Apr 28, p205 May 26, p59 Jun 23
Wage rates; Bldg board & lath and insulation:
p38 Mar 3, p34 Mar 31, p64 Apr 28, p44 Jun 2, p41 Jun 30

• Scoreboard
Wage rates, material prices, ENR index review:
p47 Jan 6, p143 Feb 10, p203 Apr 7, p62 May 5, p65 Jun 9
ENR cost indexes in 22 cities; Industrial advance planning:
p69 Jan 13, p147 Feb 17, p303 Mar 17, p77 Apr 14, p90 May 12, p297 Jun 16
Backlog:
p60 Jan 20, p63 Feb 24, p63 Mar 24, p75 Apr 21, p81 May 19, p65 Jun 23
Equipment orders & Price indexes; Employment, Materials Shipments; Contractor failures:
p165 Jan 27, p46 Mar 24, p43 Mar 31, p80 Apr 28, p226 May 26, p53 Jun 30
New industrial plant advance planning; State and municipal bond sales for construction:
p52 Feb 3, p53 Jun 2

• Unit Prices
Municipal Airport Jackson, Fla. p35 Jan 6
Kansas rail relocation draws keen competition. p35 Jan 6
Widening Los Angeles freeway. p51 Jan 13
Deepening North Carolina harbor. p48 Jan 20
Wisconsin storm sewers. p48 Jan 20
Overpasses rebuilding in Louisiana. p147 Jan 27
Florida waterline. p45 Feb 3
Indiana Bridge and road work. p132 Feb 10
Five steel bridges in Delaware. p123 Feb 17
Louisiana levee protection costs 52.5 cents per cu yd. p43 Feb 24
Pennsylvania highway at $192,000 a lane mile p43 Feb 24
Paving 5 miles in Connecticut. p37 Mar 3
California concrete storm drain. p56 Mar 10
Texas road and bridge bids. p56 Mar 10
Pennsylvania Turnpike tunnels. p145 Mar 17
West Virginia road. p156 Mar 17
Louisiana bridge. p158 Mar 17
Hawaii irrigation pipeline. p165 Mar 17
Los Angeles storm drain. p166 Mar 17
California canal setting basin. p168 Mar 17
Uniform work descriptions can speed unit price estimates. p130 Mar 17
San Juan Chama project, New Mexico. p50 Mar 24
Baltimore beltway gets bridges. p35 Mar 31
Lower early pay wins contract in San Francisco county. p184 Apr 7
Albuquerque flood control diversion channel. p58 Apr 14
San Francisco airport runway. p58 Apr 14
Indiana road paving. p59 Apr 21
Boston airport taxiways p60 Apr 28
Open-cut sewer in Chicago. p69 May 12
Concrete pipe wins Monroe County water line. p69 May 12
Spokane bridge. p63 May 19
Minnesota runway excavation. p63 May 19
Shelbyville Reservoir and dam work requires CPM. p200 May 26
Levee construction in San Joaquin County, California. p43 Jun 2
BARTD elevated structures. p49 Jun 9
Slimy silt complicates Calif. shoreline job. p131 Jun 16
Drill holes for Nevada nuclear tests p132 Jun 16
Vermont sewer job. p132 Jun 16
Anchorage, Alaska wharf to be expanded. p136 Jun 16
Laurel Reservoir, Ky. diversion tunnels. p136 Jun 16
Salina Pumped Storage project, Tulsa, Okla. p138 Jun 16
New Hawaiian roads and relocation. p142 Jun 16
Six contractors compete for Washington, D.C. expressway tunnel. p57 Jun 23
New York City sewer lines put under train yard. p40 Jun 30
Louisiana four-lane road has subbase in marsh. p40 Jun 30

CONSTRUCTION INDUSTRY
see also: STANDARDS & SPECIFICATIONS
BUILDING CODES & INSPECTION
RESEARCH & TESTS
Men who made marks in construction during 1965 e p72 Jan 6
Industry groups against national building code. p22 Jan 13
Cheers for construction men in big Northeast blackout. RC p12 Jan 13
Federal dollars for construction research. WO p19 Jan 13
Construction escalates in Vietnam.**, map. p11 Feb 3
Time and logistics complicate construction in South Vietnam.**, map. p60 Feb 10
Construction's hot topics fueled again: specs, bldg codes, research. WO p11 Feb 24
"Human value" objective in construction. WO p9 Mar 3
Comments on ENR's Man of the Year. RCs p16 Mar 17
Competition for building products and equipment. B p28 Apr 28
Milwaukee fetes the construction industry.**. p24 May 12
Construction industry Joint Conference should act now on labor shortages. e p324 Jun 16

CONSULTANTS, see ENGINEERING

CONTRACTORS, BIDS & CONTRACTS
Mexican construction firms suffer contract drought. p48 Jan 6
The gamble of bidding. e p84 Jan 20
Top 500 designers. RCs p40, p57 Jan 27
National Constructors Assn. elects G.W. Jones as president.*. p72 Jan 27
Smart contractor hits on seven tricks that speed pile-driving.**. p110 Jan 27
Three companies receive merger offers. p163 Jan 27
Single contract gains a point at Illinois Supreme Court. p53 Feb 3
Contractor failures climb in 1965, table. p53 Feb 3
Labor Secretary orders pre-contract quiz on bias. p54 Feb 3
Salt Lake City bid depository case reaches U.S. Supreme Court. CW p47 Feb 10
AGC campaigns against situs picketing bill. CW p47 Feb 10
ABC's new tactic on situs picketing bill. CW p9 Feb 24
Contractors urged to humanize jobs. WO p9 Mar 3
Builders' Association of Chicago curbs personnel pirating. CW p11 Mar 10
AGC scores big wage increases. p72 Mar 10
AGC wives oppose situs picketing bill. CW p77 Mar 17
An inspector speaks on bidding. RCs p42 Mar 17
Single vs separate contract system: Chicago Univ campus job still a bid price headache. p306 Mar 17
AGC convention hears the jingling of $billions. p15 Mar 24
AGC tackles industry's labor shortage. p11 Mar 27
BuDocks cost-plus contract contains incentive award p13 Mar 31
Spain: Americans may enter bids on tollroad jobs. p23 Mar 31
Reduce costs, improve management, Chicago architects tell contractors. p23 Mar 31
Cost-plus contract criticized; BuDocks new contract system. e p234 Apr 7
National Constructors oppose situs picketing. p215 Apr 7
Ohio and Illinois university jobs trip on contracting system. p81 Apr 14
Court approved plan keeps bankrupt Calif. contractor at work. p81 Apr 14
Contractor bankruptcies drop, table p82 Apr 28
Equal-hire clause aims at contractors. WO p13 May 5
St. Louis contractors fear wage settlement was too high. CW p15 May 12
National Constructors Association is not a member of Preserve the Ban on Secondary Boycott Committee. RC p9 May 19
Top 400 contractors. p32 May 19
Florida contractor becomes a retailer in NLRB ease. p89 May 19
Contractors face new bias hurdle. p84 May 19
On bids and estimates. e p252 May 26
Federal contracts are off 20%, graph. p77 May 26
Contractors' profits, tables. p71 May 26

Suggested amendment to California contractor license law. CW p7 ... Jun 2
AGC on better way to handle labor contracts. CW p69 ... Jun 9
17th century letter on contractors' fees and shabby work. p83 ... Jun 16
Contractors' profits dive as volume soars; low bid system criticized.* p298 ... Jun 16
Too high bid begets another on St. Louis Poplar Street Bridge. p300 ... Jun 16
Contractors ask breaks abroad, government says soft "no".* p15 ... Jun 23
High bids threaten dip in contract awards. p54 ... Jun 30
Ohio contractors on public works to cut loose from unions that discriminate. p67 ... Jun 30

CONVEYOR BELTS, see: EQUIPMENT

CORPS OF ENGINEERS, see: ENGINEERING

COURT CASES, see: LEGAL

CRITICAL PATH METHOD, see: MANAGEMENT

CULVERTS, see: PIPES; TUNNELS

D

DAMS see also: LOCKS; POWER; RIVERS
Hydropolis: dams should become communities. B p25 ... Jan 6
FPC changes dam inspection method. WO p9 ... Jan 6
Dike shields development from Ohio Turnpike noises. p37 ... Feb 3
Reasons for dam failures discussed at international meeting, in Rio de Janeiro. p78 ... Jun 16

• American

Allegheny Dam, Pa
Gets achievement award.* p71 ... Jan 27
Utilities to use reservoir, Seneca pump shortage project to be built.* p17 ... Apr 14

Exchequer Dam, Merced River, Calif
Old dam fades wetly away, new rockfill structure rises.* p26 ... Apr 28

Foster Dam, Oregon
$10-m job to be completed ahead of schedule. CW p11 ... Jun 23

Gorge Dam, Seattle
Merritt-Chapman & Scott to get additional $1.3 m for dam completed six years ago. CW p67 ... Jun 16

Grand Coulee Dam, Columbia River
New generating capacity to be added.* p17 ... Jun 23

Hells Canyon Dam, Snake River
Everything rides the trestle as concreting starts.* p17 ... Apr 21

Hell Hole Dam, Rubicon River, Cal
Progress on rockfill dam in spite of troubles.** p28 ... Jan 20

High Mountain Sheep Dam, Snake River
Court backs private utility dam. p21 ... Mar 31
Washington Public Power Supply System goes against Northwest Power. B p28 ... Apr 28

Libby Dam, Montana
Great Northern Railway tunnel bid exceeds estimate. CW p11 ... Apr 14

Livingston Dam, Trinity River
Houston approves water supply project. p15 ... Feb 24

Matilija Dam, Calif
Successful recovery. CW p7 ... Mar 31

Nickajack Dam, TVA
New dam replaces old leaky one.** p84 ... May 26

Oroville Dam, Calif.
World's highest earthfill, goes around the clock.* p118 ... Feb 10
Contractor's big claim to get small answer. B p19 ... Feb 24
Vibrators shake sticky bins for better earthmoving. p194 ... Mar 17
Favorite rocks contributed to dam. B p79 ... May 26

San Adreas Fault Dam, Calif
Bechtel Corp. to build small dam north of Los Angeles. p78 ... Jun 16

Seneca Dam, Potomac River
Plan put to sleep. p26 ... Jan 13

Smith Mountain Dam, Va.
Pumped-storage project is almost completed.* p117 ... Feb 10

West Branch Dam, Ohio
Electro-osmosis stabilizes foundation clay.** p36 ... Jun 23

Yellowtail Dam, Montana
Topped out.* p119 ... Feb 10

• Foreign

Africa
Hendrik Verwoerd Dam, Orange River, South Africa: Anglo-French venture wins job. p162 ... Jun 16

Asia & Pacific
Australia: Snowy Mountain dams create mountain top reservoirs.* map. p28 ... Jun 2
India: Mysore state builds surki dams on Sharavati project.** map. p40 ... Mar 10
Japan's Nagawado Dam site: landslide kills 11 workers.* p16 ... Mar 31
Laos picks Japanese firm to build Nhum River Dam. B p78 ... Apr 7
Pakistan: Mangla Dam still a year ahead despite war, redesign, map,** diags. Cover and p30 ... Jan 13
Pakistan: Americans beat Russians in Mangla Dam race. CW p7 ... Feb 3

Canada & Mexico
Canada: Portage Mountain Dam underground powerhouse delayed. CW p21 ... May 19
Mexico: Inadvertent dam near Tijuana frets engineers,* p13 ... Jan 6
Inadvertent dam near Tijuana frets engineers.* p13 ... Jan 6
Mexico kept control over fill that became a dam. RC p4 ... Feb 3

Europe
France: long legal proceedings in Malpasset Dam collapse acquittal. CW p77 ... Mar 17
France: Malpasset Dam collapse acquittal. p19 ... May 5
France: Pierre Benite lock and dam on the Rhone River.* p33 ... Jun 30
Yugoslavia builds Grancarevo and Gorica Dams near Dubrovnik,* map. p26 ... Mar 24

Middle East
Jordania starts Mukhaiba Dam on Yarmouk River. B p21 ... Jun 9
Syria plans hydro and irrigation dam on the Euphrates River. CW p11 ... Apr 28
Syria: Euphrates River dam to be started by Russian engineers. CW p7 ... Jun 2
Turkey: Keban Dam construction begins. B p21 ... Jun 23

South America
Brazil's Boa Esperanca Dam to be designed by Kaiser Engineers. B p57 ... Feb 10

DEBRIS, GARBAGE: see: HEALTH: see also: CITIES

DEFENSE, see: AIRPORTS; BUILDINGS; SPACE; CONSTRUCTION BUSINESS

DESALTING, see: WATER SUPPLY, • Treatment

DETERGENTS, see: WATER POLLUTION

DIKES, see: DAMS; SOIL • Erosion, Shore protection

DISASTERS, see: ACCIDENTS & DISASTERS

DISCRIMINATION, see: ETHICS

DOCKS, see: PORTS AND HARBORS

DOMES, see: ROOFS

DOORS AND WINDOWS, see: BUILDING DESIGN & COMPONENTS

DRAFTING, see: SURVEYING
see also: PRODUCTS; INSTRUMENTS & TOOLS

DRAINS, see: PIPES; SOIL; TUNNELS; WEATHER

DRAWING, see: SURVEYING
see also: PRODUCTS; INSTRUMENTS & TOOLS

DREDGING, see: SOIL
see also: PRODUCTS

DROUGHT, see: IRRIGATION; WATER RESOURCES; WEATHER

DRYDOCKS, see: PORTS AND HARBORS

E

EARTHQUAKES, see: ACCIDENTS; BUILDING CODES; SOIL

ECONOMY, see also: CONSTRUCTION BUSINESS; TAXATION & TARIFFS; LABOR (Wages)
Steel price fight sparks talk of direct government controls. WO p9 ... Jan 6
Vietnam war vs. Great Society poses a budget problem.* p14 ... Jan 6
Stress wages in guidelines against inflation. e p96 ... Jan 13
Few cry over steel price boost; copper prices cause a flurry. p69 ... Jan 20
Inflation is keynote of President Johnson's economic message. WO p53 ... Jan 27
South East Asian market seen growing. p163 ... Jan 27
Food drive means construction in underdeveloped countries. WO p9 ... Feb 3
Presidents' economic message barely mentions public works. WO p9 ... Feb 3
President pushes wage restraint. p54 ... Feb 3
Foreign aid to shift from heavy industry to living conditions. p57 ... Feb 10
Merger tides ebb and flow. p150 ... Feb 17
Additional 2.4 kw in Appalachia. B p30 ... Feb 17
Building trades reject wage restraint,** wage increases table. p13 ... Feb 24
Eastern Stainless Steel Corp. & Arundel Corp. end merger plans by mutual consent. CW p7 ... Mar 3
What are the wage-price guidelines, graphs. p50 ... Mar 3
Interest rates climb sharply. p47 ... Mar 3
High interest rates stall bond sales. p77 ... Mar 10
Will booming economy bring tax increase ?* p85 ... Mar 17
High interest bond rates continue. CW p77 ... Mar 17
N.J. Turnpike bonds stalled by cost. p20 ... Mar 24
Soviet 5 yr plan recognizes profit. p65 ... Mar 24
Inflation: we've got it. e p88 ... Mar 24
Inflation fight engages President. p11 ... Mar 31
President Johnson should have addressed AFL-CIO on wage restraint. e p64 ... Mar 31
Merger offered largest paving company. p44 ... Mar 31
AGC president offers anti-inflation advice—build but save. CW p67 ... Apr 7
Steel monopoly likely in Britain. p73 ... Apr 7
President fights inflation; capital spending cut asked. p71 ... Apr 7
Administration is losing battle to keep wage-price guidelines. CW p11 ... Apr 14
Can the President turn back the tide of inflation * e p100 ... Apr 14
Federal projects canceled in Midwest. p16 ... Apr 14
Government soft-pedals public works outbacks. WO p13 ... Apr 14
Capital spending plans still soaring, McGraw-Hill Dept of Economics table. p15 ... Apr 14
AGC president advocates efficiency and productivity to fight inflation. CW p11 ... Apr 21
Anti-inflation cutbacks show up. WO p15 ... Apr 21
Feeling a sacrificial goat to inflation, builders seek credit controls.* p77 ... Apr 21
Vague purpose puts Philadelphia bond proposal in litigation. p78 ... Apr 21
Homebuilders want public works share cutbacks. WO p13 ... Apr 28
Strong measures needed to curb inflation. e p108 ... May 12
Economy woes: who's got money? WO p17 ... May 12
How to cut spending in election year is President's and congressmen dilemma. WO p17 ... May 12
Hill Burton funds frozen for anti-inflation move. CW p15 ... May 12
Construction blamed for Canadian inflation. p83 ... May 19
Construction slowdown pressures are easing. WO p23 ... May 19
Business leaders and government still on good terms ... May 26
Congress challenges defense job cuts. p233 ... May 26
Spending plans slip, changed by turbulent economy, table. p54 ... Jun 2
Voluntary cutbacks on capital spending don't work. e p72 ... Jun 2
U.S. products to be used when building abroad. WO p13 ... Jun 9
Full employment economy comes before the rights of Negroes according to George Meany. CW p11 ... Jun 9
Treasury clips tax exempt industrial aid bonds. p67 ... Jun 23

EDUCATION & APPRENTICESHIP
see also: BUILDINGS, • Schools
Furor on goals of engineering education. p25 ... Jan 13
Training program for survey crews. p79 ... Jan 13
Engineering education. RC p16 ... Jan 27
Perspective needed in education. RC p6 ... Mar 10
The Producers' Council to conduct management training program. B p21 ... Apr 21
Ford Foundation to expand industrial residency program for engineer PhDs. p18 ... Apr 28
Hire engineer-teachers PhDs. e p100 ... Apr 28
Continuing education for engineers. e p84 ... May 5
Summer jobs for students. e p104 ... May 19
Cleveland employers radio for apprentices. p237 ... May 26
Civil engineering graduates are in short supply.* p15 and e p84 ... Jun 9
Transportation-engineering program established at Rensselaer Polytechnic. B p21 ... Jun 9
Federal funds spur bricklayers' pre-apprentice training. p70 ... Jun 9
Educators at odds over goals, at meeting in Pullman, Wash. p11 ... Jun 30

ELECTRICITY, see: POWER

ENGINEERING
Construction Engineering is a better term than Civil Engineering RC p4 ... Jan 6
Public relations and engineers. RC p5 ... Jan 6
Engineers as managers. e p188 ... Jan 27
Civil Engineering vs. Construction Engineering. RCs p6 ... Feb 10
Apollo steel complex in Florida names outstanding civil engineering achievement. CW p47 ... Feb 10
Engineers fight for directorships at Calif Dept of Water Resources. p26 ... Feb 17
Engineers as managers. RC p33 ... Mar 17
Corps of Engineers in Vietnam differs from World War II.** p81 ... Mar 17
Diving engineers for underwater inspection.* p84 ... Mar 17
CEs lose fight: non engineers can direct Calif water districts. p84 ... Mar 17
Engineers positions in California. B p21 ... Apr 21
PHS water engineers prefer not to move. WO p13 ... Apr 28
Ford Foundation to expand industrial residency program for engineer PhDs. p18 ... Apr 28
Civil engineers jobs to be discussed by California legislature. B p21 ... May 5
Engineers not affected by foreign agents act. WO p69 ... May 26
Corps of Engineers to lease college labs for its own projects. p12 ... Jun 30

• Employment, Fees, Manpower
Advertising agency claims engineer scientist demand for index is highest ever. B p57 ... Feb 10
Consultants to be used by hwy depts. WO p21 ... Feb 17
BPR to tighten fees for hwy consultants. p17 ... Mar 24
Engineer shortage acknowledged by Labor Dept. WO p9 ... Mar 31
Construction consultants need a push. RC p33 ... Apr 7
Military engineers wanted. CW p11 ... Apr 14
Civil engineers decry Calif fee rules. p81 ... Apr 28

(Continued)

(Continued)

Hire engineer-teachers PhDs. e p100 Apr 28
Congress may study 6% limit on architect-engineer fees. WO p13 May 5
Consultants fret over fees at Tulsa meeting. p87 May 12
Consulting Engineers eager for Latin American business. CW p21 May 19
Civil engineering graduates are in short supply,*. p15 and e p84 Jun 9

• Societies
American Society of Civil Engineers
Structural engineering conference meets in Miami, discusses steel and concrete research* p53 Feb 10
Water resources conference in Denver. East vs. West on federal policy. p74 May 26
Richard H. Tatlow is president-elect,*. p21 Jun 23
American Society for Engineering Education
NSPE rejects accreditation proposal in "Goals" controversy. p25 Jan 13
Engineers Joint Council
Discuss standard technical vocabularly with Department of Defense B p21 Mar 24
National Society of Professional Engineers
Rejects ASEE study's accreditation proposal in "Goals" controversy. p25 Jan 13

ENGINEERING NEWS-RECORD
Congratualtions for pungent ENR writing. RC p32 Feb 10

ENVIRONMENT, see: PLANNING & ENVIRONMENT see also: ARCHITECTURE; HEALTH; CITIES

EPOXIES, see: ADHESIVES & COATINGS

EQUIPMENT & MATERIALS see also: PRODUCTS (by names of manufacturers) CONCRETE; STEEL, etc.
Equipment rental rates correction. RC p57 Jan 27
Vietnam war puts pressure on equipment manufacturers CW p7 Feb 3
Vietnam war slows equipment deliveries,*. p23 Feb 17
Watch your equipment needs. e p176 Feb 17
Construction Equipment Exposition & Road Show to be held in Chicago 1969. CW p7 Mar 3
New construction equipment in Vietnam,**. p81 Mar 17
Index card system of code approved products. p19 Mar 10
Industrial boom pushes equipment cost up: p114 Mar 17
Equipment can be better, Earthmoving Industry Conference told. p20 Apr 14
Competition for building products and equipment B p28 Apr 28
Equipment, materials prices rise. p63 May 5
Critical construction materials scarce. p11 Jun 2
New plant and equipment spending plans changed by turbulent economy, table. p54 Jun 2
Plant & equipment spending is still booming. WO p13 Jun 9
Machinery: delivery lags as prices and orders climb higher. p118 Jun 16
Materials: shortages push prices up; quarterly cost review. p120 Jun 16
Labor and materials shortages accelerate construction cost rise. p88 Jun 16

• Cutting; Demolishing
Chain becomes saw to demolish sunk drydock in Maryland,**. p39 Apr 14

• Drilling
Floating drill platform tilts into position in Japan,*. diag. p98 Jan 27
Diamond drills help install runway lights,*. p35 May 5
New percussion drill makes shafts at Lincoln Center NYC,*. p39 Jun 30

• Hauling & Materials handling
Off-hwy trailers to haul 150 tons,*. p44 Apr 28

• Hoisting, Lifting
Twin gin poles hoist big load in Louisiana,*. p132 Apr 7
Crane goes to work 45 ft up,*. p138 Apr 7
Floating crane erects Japanese bridge,**. p131 May 26
Vacuum lifts asphaltic pavement sections,*. p166 May 26

ETHICS
Governor Volpe's campaign: architect choice hit as political. p231 May 26
Charges of cheating in civil service examinations of Chicago's Sanitary District. CW p7 Jun 2
Fraud charged in Chicago Sanitary District job examinations. p20 Jun 9

• Civil Rights
Secretary Udall praises ENR's support of equal employment opportunity. RC p12 Jan 13
Contractors, not unions, blamed for discrimination. CW p17 Jan 13
Bias issue smolders on many fronts; union investigations. p71 Jan 20
Gateway Arch job in St. Louis is an equal employment opportunity test case. CW p61 Jan 27
Bias issue in St. Louis Mo. shakes Capitol Hill. p170 Jan 27
Government contractors to file additional report on equal opportunity. CW p7 Feb 3
Labor Secretary orders pre-contract quiz on bias. p54 Feb 3
Showdown begins on union bias in St. Louis. p146 Feb 10
Federal crackdown on bias may fizzle. p153 Feb 17
St. Louis electrical contractor tries to promote equal employment opportunity in union. CW p19 Feb 17
Steam fitters hire Negroes in St. Louis CW p9 Feb 24
Ohio civil rights commission reports on Cincinnati practices. p51 Mar 3
Federal government's guts on civil rights question. CW p77 Mar 17
Bias investigation in New York City construction. CW p11 Mar 24
Rent supplement fight is one of civil rights. WO p13 Mar 24
Bias hearings will be resumed in NYC construction industry. p210 Apr 7
U.S. Commission on Civil Rights conducts hearings in Cleveland. p84 Apr 14
HEW may block funds for bias p17 Apr 21
Equal hire clause aims at contractors. WO p13 May 5
Contractors face new bias hurdle. p84 May 19
Ohio to push integration of construction workforces. CW p67 May 26
More public works jobs for Negroes. WO p69 May 26
Full employment economy comes before the rights of Negroes according to George Meany. CW p11 Jun 9
U.S. Court rebukes plumbers on bias. p306 Jun 16
Unions must bend on hiring practices in civil rights struggle. e p84 Jun 23
Ohio contractors on public works to cut loose from unions that discriminate. p57 Jun 30

EXCAVATING, see: SOIL see also: PRODUCTS

EXPLOSIVES see also: PRODUCTS
Blasting blasters. RC p33 Mar 17

EXPORT-IMPORT BANK, see: CONSTRUCTION BUSINESS • Foreign

EXPORTS, see: ECONOMY; see also: TAXES & TARRIFS

F

FAILURES, see: ACCIDENTS AND FAILURES

FAIRS, see: CITIES; see also: BUILDINGS

FANNIE MAE, see: HOUSING

FEDERAL AVIATION AGENCY, see: AIRCRAFTS; AIRPORTS

FIRE, see: ACCIDENTS & SAFETY; PRODUCTS; BUILDING CODES INSPECTION

FISH, see: DAMS; RIVERS; WATER POLLUTION

FLOODS, see: ACCIDENTS; RIVERS; WEATHER

FOUNDATIONS, see: BRIDGES; BUILDINGS; PILES; SOIL

FRAMING, see: BEAMS & COLUMNS; CONCRETE; STEEL; ROOFS

FROST, see: WEATHER

FLUORIDATION, see: WATER SUPPLY • Treatment

G

GARAGES, see: BUILDINGS

GARBAGE, see: HEALTH

GAS, see: PIPES; UTILITIES; BUILDINGS

GENERAL SERVICES ADMINISTRATION, see: BUILDINGS • Federal

GIRDERS, see: BEAMS

GLASS, see also: PRODUCTS
New ways to use glass in buildings,*. p80 Apr 7
Cracking glass at grandstand track in Illinois. CW p11 May 5

GROUT, see: CONCRETE; SOIL see also: PRODUCTS

H

HEALTH, SANITATION; see also: WATER POLLUTION; PLANNING & ENVIRONMENT
Garbage compressed, buried in big landfill operation,*. p196 Mar 17
Federal experiments in waste control urged by Academy of Science. p72 Apr 7
Solving a big pollution problem: paunch manure to be fed to cattle. p149 Apr 7
Trash dump obsolete; waste disposal must be planned for 1000 years, sanitation conference in California told. p20 Apr 14
PHS water engineers prefer not to move. WO p13 Apr 28
Solid waste turns into fertilizer, diag. p46 Apr 28
Trouble with garbage burning in San Francisco. B p27 May 12
Burning paunch manure. RC p8 May 12
Will we bury ourselves in garbage, crashs. p25 May 19

HEATING, see: AIRCONDITIONING, HEATING

HIGHWAY DESIGN, MAINTENANCE & SAFETY see also: WEATHER
Political hands off route selection, BPR's decision final. e p96 Jan 13
BPR plans hwy beautification symposium. WO p63 Jan 27
Transportation research shifts gears. p70 Jan 27
Politics can be used in deciding highway location. RC p4 Feb 3
*Access ramps for Dan Ryan Expressway, Chicago. p89 Feb 10
Botts dots replace white line in Calif. hwys,*. p78 Feb 17
Hwy safety means control, not cash. WO p21 Feb 17
ARBA targets: beauty and research,*. p14 Mar 3
Elevated road at the Brenner Pass, Austria,*diags p30 Apr 14
The public wins a scrap: scenic location approved for Westchester I-87. e p100 Apr 21
High cost of hwys buried in tunnels. e p100 Apr 28
Six expressways intersect in 1.8 miles in Dallas,*. p17 May 5
Politics and highway planning. RC p8 May 12
Roads and natural beauty: they take us to it. p82 May 26
High cost of road maintenance. e p72 Jun 2
Discord on urban road beauty. e p84 Jun 9
National Highway Research needs to be studied by Bertram D. Tallamy and Wilbur Smith. B p21 Jun 9
Hwy safety laggards may lose federal money. p16 Jun 23

HIGHWAYS
Highways carry the load of U.S. transportation; annual review,**. p82 Feb 10
Consultants to be used by hwy depts. WO p21 Feb 17
BPR urges states to invest idle money earning interest. WO p11 Feb 24
ENR surveys state hwy depts on short span bridges. diags,* p25 Feb 24
100,000 miles to be built after completion of Interstate. CW p9 Feb 24
Interstate will not be completed in 1972. e p88 Feb 24
Federal policies mean states are penalized for tollroads. p88 Mar 17
Hwy labor requirements dropping, table. p310 Mar 17
Interstate system to be completed in 1974? p20 Mar 24
BPR to tighten fees for hwy consultants. p17 Mar 24
Hwy fund can't be used for other transport purposes- WO p13 Mar 24
Legislation to beef up Hwy Trust Fund. p12 Mar 31
1966 plans for tollroads and toll bridges. p76 Apr 7
State hwy contracting plans: 1966 will break records. p74 Apr 7
BPR allots federal highway aid to 15 states. CW p11 Apr 21
National Hwy Users Conference defends road funds. p16 Apr 21
Road boom is great, but mass transport needed. e p100 Apr 21
Urban interstate work perks up, table. p15 Apr 28
House roads subcommittee: hwy outlook stormy as costs rise. p21 Apr 28
Urban expressways – last best test for Interstate. e p84 May 5
Highway officials bid Congress to accept Interstate estimate. CW p21 May 19
Interstate annual map: completion slows, fewer miles now in progress. p28 May 19
Whitton praises hwy officials and asks for more effort to finish Interstate system. p76 May 26
Who foots the bill for hwys – enigma in Washington. p76 May 26
Appalachian hwy construction moves forward, table. p17 Jun 9
Hwy trust fund to remain intact. WO p69 Jun 16
BPR shapes up the post-interstate hwy battle,*. p71 Jun 16
Hwy bid prices rise, 2nd quarterly cost roundup, price indexes. p90 Jun 16
AASHO to conduct management training institutes at the University of Mississippi. B p21 Jun 23
BPR to be renamed Federal Hwy Administration in new transportation Dept. WO p9 Jun 30

• American

California
Deadline for decision on Golden Gate approaches. CW p7 Jan 6
Utility vs beauty and San Francisco roads. RC p4 Jan 6
Widening Los Angeles freeway, unit prices. p51 Jan 13
*Overhead freeway, Sacramento, Calif. p92 Feb 10
Botts dots replace white line,*. p78 Feb 17
Bumpcutters on San Bernardino Freeway make old pavement better than new at half the cost,**. p28 Mar 10
Four lanes pave in one pass, San Bernardino-Palm Springs area,**. p30 Mar 10
$100m urban roads program proposed by Gov. Burns. B p25 Mar 10
Lower early pay wins contract for San Francisco highway, unit prices. p184 Apr 7
Nuclear gages control compaction on Calif hwy jobs. p148 Apr 7
District offices in 11 cities to be linked to IBM computer. B p79 May 26

D.C.
Expressway projects to be redesigned for beauty. CW p7 Mar 31
Renewal package offered to mollify expressway critics in Washington. p27 May 12

Hawaii
New roads and relocation: unit prices. p142 Jun 16

Indiana
Marion County bridge and road unit prices. p132 Feb 10
Indiana road paving unit prices. p59 Apr 21

Kansas
Feasibility study of three new tollroads. B p25 Mar 10
Tornado clears path for Topeka expressway. p14 Jun 30

Kentucky
132 miles of toll facilities planned. B p21 May 5

Louisiana
Proposed tollroad from New Orleans to Shreveport. B p21 May 5
Larose-Lafitte Toll Road may float on swamp near New Orleans. p78 May 26
Four-lane road, unit prices. p40 Jun 30

Massachusetts
Boston's long-delayed Inner Belt expressway to be built. CW p11 Mar 24

Michigan
Rolling surcharge displaces muck to stabilize U.S. 131 near Cadillac,**. p28 ... Jan 13
Michigan runs short of money for primary roads. p80 ... Jun 16

Minnesota
Engineers thread Interstate 35 through Duluth,**. p26 ... May 5
Pavement test project rejected. B p21 ... Jun 23

New Jersey
Garden State Parkway to build cultural center,*. p30 ... Feb 17
Experiments with "fog broom". CW p9 ... Feb 24
Tumpike bonds stalled by cost. p20 ... Mar 24
Pancake lights on Garden State Parkway. B p27 ... May 12

New York
Westchester County wrangling on route selection. e p96 ... Jan 13
Lower Manhattan Expressway definitely out. CW p11 ... Mar 10
State gets Appalachia roads. p83 ... Mar 17
Politics and planning NYC hwys and transportation, e p326 ... Mar 17
The public wins a scrap: route of Westchester I-87 finally selected. e p100 ... Apr 21

Ohio
Dike shields development from Ohio Tumpike noises. p37 ... Feb 3
Landfill found for I-71 quicksand in Cleveland. p28 ... Feb 17
Space for transit urged on I-90 median. p16 ... Mar 3
Reversible center lanes on Cleveland's Northwest Freeway. B p21 ... Apr 21
BPR investigates right-of-way acquisition. CW p7 ... Jun 30

Oregon
$65m highway plan recommended for Salem area. IB p19 ... Feb 24

Pennsylvania
Tumpike Commission awards $26m for tunnels. B p18 ... Feb 3
Clearfield County highway unit prices. p43 ... Feb 24

Tennessee
Roadbuilders tame Tennessee Mountains as I-75 proceeds from Florida to Michigan,**. p50 ... May 19
Heavy traffic and close quarters trouble I-40 builders in Knoxville,**. p22 ... Jun 2

Texas
McAllen road and bridge unit prices. p56 ... Mar 10
Six expressways intersect in 1.8 miles in Dallas,*. p17 ... May 5

Virginia
Fixes location of most Interstate routes. B p18 ... Feb 3
Department of Highways builds silos for salt near Roanoke. B p25 ... Mar 10
Statistical quality control methodology in hwy and airfield construction. p25 ... May 12

Washington
Seattle Transit System seeks exclusive bus lane on freeway. CW p7 ... Jun 30

West Virginia
State Route 2 unit prices. p156 ... Mar 17

Wyoming
Dept of Hwys to purchase tires by the mile. B p25 ... Jan 6

•Foreign
Interamerican Hwy Route is found to close Darien Gap, maps,**. p98 and e p188 ... Jan 27
Worldwide expenditures for highways match vehicle population. B p19 ... Feb 24
Australia plans freeway from Melbourne to city airport. B p21 ... May 5
Austria: Wide crack opens in new expressway built too fast,*. p102 ... Jan 27
Austria: steel rib cage moves form for elevated road at Brenner Pass,**, diags. p30 ... Apr 14
Austria: Vienna contractor minimizes falsework on elevated highway,**. p36 ... Jun 9
Japan: U. S. contractor builds expressway near Shizuoka,**. p94 ... Apr 7
Mexico: Hwy fill embankment fails in heavy rains,*. p13 ... Jan 6
Mexico: Improvement planned for 5,000 miles secondary roads. B p25 ... Jan 20
Mexican expressway crumbles,*. p16 ... Mar 31
Mexican roadbuilders fight groundwater.*, diags. p132 ... May 26
Netherlands: hwy near Amsterdam goes under runway,*. p188 ... Mar 17
New Zealand completes construction on 1200 mile tourist road,**. p108 ... Apr 7
Peru: Starts 146 mile road; U.S. equipment shipped up the Amazon, map. p16 ... Jan 20
Peru builds 146 miles of trans-Andean road, map,**. p46 ... Jun 23
South African expressways**. p106 ... Apr 7
Thailand to call Lomsak-Saraburi highway bids. B p21 ... Apr 21

FLOORS, see: BUILDINGS DESIGN & COMPONENTS •Ceilings and Floors

HOMES, see: BUILDINGS; HOUSING

HOTELS, see: BUILDINGS

HOUSING, see also: BUILDINGS; CITIES
Financing federal loans through Fannie Mae. WO p19 ... Jan 13
Role of private builders in public housing program. WO p19 ... Jan 13
FHA hikes mortgage interest rate ¼%. WO p9 ... Feb 3
Armed Services Committee vs. secretary McNamara on defense housing. WO p49 ... Feb 10
Pessimistic home-starts prediction. CW p9 ... Feb 24
Organization announced for new Dept of Housing & Urban Development. p13 ... Mar 3
Boost in interest rate on mortgages came too late and was too small. B p75 ... Mar 10
Italian home construction slow. p184 ... Mar 17
Rent supplement fight is one of civil rights. WO p13 ... Mar 24
Philadelphia housing rehabilitation plan fails. p207 ... Apr 7
FHA raises home mortgage rates CW p11 ... Apr 14
European bearing wall system enters U.S. housing market,**. p24 ... Apr 14
Britain seeks guaranteed quality in housing. p18 ... Apr 14
C. A. Dieman becomes FHA chief for technical standards WO p13 ... Apr 21
NAHB wants public works to share in anti-inflationary cutbacks. WO p13 ... Apr 28
High price of mortgage money. WO p17 ... May 12
Rent subsidies killed for 1967. p20 ... May 12
Rent supplement program approved. WO p23 ... May 19
Controversial Proposition 14 in California's housing. CW p67 ... May 26
Housing starts still fall. CW p11 ... Jun 23
Homebuilders ask for national housing policy. WO p9 ... Jun 30

I

ICE, see: SOIL; WEATHER

INCINERATORS, see: BUILDINGS; HEALTH

INDUSTRIAL PARKS, PLANTS, SITES, see: BUILDING; CITIES

INDUSTRIAL WASTES, see: WATER POLLUTION

INFLATION, see: ECONOMY

INSTRUMENTS AND TOOLS
see also: PRODUCTS; RESEARCH
Ultrasonic detector seeks out duct leaks,*. p192 ... Mar 17
Nuclear gages control compaction in Calif. p148 ... Apr 7
Electronic sensors gage Illinois River conditions. p150 ... Apr 7
Cybernetic anthropomorphic machines follow operator's movements,*. p37 ... May 5

INSURANCE
Project insurance fight flares; NYState University Fund stirs up protests against wrap-up plan. p73 ... Jan 13
Building Industry Employers may accept New York State's State University wrap-up insurance program. CW p7 ... Jan 20
Wrap-up insurance in abeyance, NYState Univ. controversy. p145 ... Feb 10

IRRIGATION
Navajo Irrigation Project: Mole finishes 2 mile tunnel,*. p78 ... May 26
Hydro and irrigation costs and indexes. p106 ... Jun 16

L

LABOR
Construction labor enigma: employment at record high, unemployment high. CW p7 ... Jan 6
Labor hassle faces Congress; outlook for federal bills. p24 ... Jan 13
Canadians seek to lick labor shortages. p79 ... Jan 13
White House mood upsets Labor. WO p9 ... Jan 20
Mixed outlook for 14(c) legislation. WO p9 ... Feb 3
14(b) loses round one in Congress. p24 ... Feb 17
Labor shortages become acute. p154 ... Feb 17
Labor management forum takes root in California. p158 ... Feb 17
Labor sounds off on wages, legislation; President Johnson shuns open fight. p49 ... Mar 3
Labor shortages; government and employers meet in 25 cities. p72 ... Mar 10
Local labor is used less than expected. WO p13 ... Mar 10
International Labor Organization names safety consultants. p311 ... Mar 17
Hwy labor requirements dropping, table. p310 ... Mar 17
AGC tackles industry's labor shortage. p69 ... Mar 24
Engineer shortage acknowledged by Labor Dept. WO p9 ... Mar 31
Labor gives Congress a hot potato. p50 ... Mar 31
Labor Dept. feels no shortage in construction manpower. WO p13 ... Apr 14
Labor requirements for various types of construction, table. p82 ... Apr 21
National conference discusses labor shortages. p85 ... Apr 28
Congress cool to labor bills. WO p23 ... May 19
Growth in demand for skilled manpower, table. p84 ... May 19
Cleveland employers radio for apprentices. p237 ... May 26
Labor Dept. sees manpower scarcity. WO p9 ... Jun 2
Labor shortages spark a bitter feud between plumbers and NAHB. p57 ... Jun 2
Supreme Court to review Philadelphia carpenters case: Landrum-Griffin law involved. CW p67 ... Jun 16
Labor and material shortages are ballooning costs of construction. p88 ... Jun 16
Many trades in many areas are in short supply, table. (ENR survey) p302 ... Jun 16
Act now on labor shortages. e p324 ... Jun 16
President Johnson wants another study of construction manpower. WO p13 ... Jun 23

•Boycotts, Pickets, Strikes
Situs picketing and electrical union bid for monopoly. p80 ... Jan 13
Strikes mark start of 1966 bargaining; deferred wage increases table. p71 ... Jan 20
AGC campaigns against situs picketing bill. CW p47 ... Feb 10
District 50 renews fight on situs picketing bill. p154 ... Feb 17
AGC's new tactic on situs picketing bill. CW p9 ... Feb 24
NLRB finds fabrication clause illegal, hot cargo boycotts in NY sheet metal workers case. p65 ... Feb 24
AGC wives oppose situs picketing bill. CW p77 ... Mar 17
Situs picketing bill heads for the House. p309 ... Mar 17
Situs picketing bill in trouble. p70 ... Mar 24
Situs picketing: big issue few people understand. p49 ... Mar 31
National Constructors oppose situs picketing. p215 ... Apr 7
Product boycotts: boomerang for labor; Texas case works against situs picketing bill. p210 ... Apr 7
Kill situs picketing. e p100 ... Apr 21
Situs picketing bill may reach House floor. p86 ... Apr 28
House prepares to debate picketing bill. p65 ... May 5
Situs picketing bill: what's behind the boycott ban. p237 ... May 26
Indiana product boycott helps explain situs picketing. p70 ... Jun 9
Congratulations on situs picketing story. RC p4 ... Jun 23
Situs picketing bill to be revived by Senator Dominick. CW p11 ... Jun 23
Vietnamese construction workers strike for more pay. CW p7 ... Jun 30
Boycott ban stymies unions. p58 ... Jun 30

•Hiring; Wages; Contracts & Bargaining
Stress wages in wage-price guidelines against inflation. e p96 ... Jan 13
Strikes-mark start of 1966 bargaining; deferred wage increases table. p71 ... Jan 20
Administration may get tough on wages. p169 ... Jan 27
President pushes wage restraint. p54 ... Feb 3
Operating engineers union adds new twist wage guidelines. p146 ... Feb 10
Wage guidelines? RCs p16 ... Feb 10
Further breaches of wage guidelines. CW p19 ... Feb 17
Wage-price guideline rejection. e p68 ... Mar 3
What are the wage-price guidelines, graphs. p50 ... Mar 3
AGC scores big wage increases. p72 ... Mar 10
Minimum wage bill extends coverage. WO p79 ... Mar 17
St. Louis hod carriers win wage increase. p310 ... Mar 17
Dispute over prevailing wages on Texas defense project. p311 ... Mar 17
President Johnson and contractors eye pay boosts; N.J. situation tough. p70 ... Mar 24
President Johnson should have addressed AFL-CIO on wage restraint. e p64 ... Mar 31
Secretary of Labor may enter wage dispute. p23 ... Mar 31
Wage guidelines don't show in new contracts. p215 ... Apr 7
Wage guidelines may backfire. e p100 ... Apr 14
Arbitration of New Jersey dispute may produce a new approach to wage restraint. p83 ... Apr 14
Six steps to better bargaining suggested by N.J. labor consultant. p82 ... Apr 21
Wage increases are the biggest ever, table. p81 ... Apr 21
Wages of Vietcong war prisoners who work on U. S. construction jobs. CW p11 ... Apr 28
Wages push concrete prices up. CW p11 ... Apr 28
New Jersey operating engineers wage formula delay. CW p11 ... May 5
Labor shortages mean big pay on Ohio jobs. p66 ... May 5
St. Louis steamfitters win big wage increase. p66 ... May 5
St. Louis contractors fear wage settlement was too high. CW p15 ... May 12
No quick relief for New Jersey operating engineers wage dispute. CW p15 ... May 12
Big raises push wage scale, table. p92 ... May 12
New labor contract settlements are running high. p89 ... May 19
Miami carpenters win 31.5% wage increase. p234 ... May 26
Labor costs soar on Peace River project. p236 ... May 26
Arbitration decision expected for New Jersey wage guidelines dispute. CW p7 ... Jun 2
House approves $1.60 minimum wage. p57 ... Jun 2
Industry bargaining needs major changes, says J. C. Garvin, labor relations consultant. p58 ... Jun 2
AGC on better way to handle labor contracts. CW p11 ... Jun 9
Contractor split breaks a long strike in Chicago. p69 ... Jun 9
Illinois operating engineers, California plumbers win big increases. p69 ... Jun 9
Wage hikes biggest yet, quarterly cost report. p117 ... Jun 16
Wage stabilization difficult to achieve. CW p11 ... Jun 23

•Hours & Overtime; Unemployment; Welfare
San Francisco carpenters will have 36 hour week. CW p67 ... Jun 16
Labor Secretary proposes guaranteed work-year. WO p9 ... Jun 30

•NLRB; Jurisdictional disputes
NLRB rules on New Jersey painters and lockout. CW p7 ... Jan 6
NLRB bans union tests as prerequisites to jobs. p58 ... Jan 6
NLRB rules on safety regulations. CW p17 ... Jan 13
NLRB eases bargaining rules. p80 ... Jan 13
NLRB finds fabrication clause illegal. p65 ... Feb 24
NLRB protects non-union subcontractor in Fargo, N.D. p309 ... Mar 17
NLRB rules in favor of factory workers installing equipment at construction sites. p84 ... Apr 14
NLRB adds confusion to picketing bill debate. p65 ... May 5
Florida contractor considered retailer by NLRB. p89 ... May 19
NLRB's decision in Brooklyn plumbers' case: section 10(k) is only remedy. p69 ... Jun 23

•Unions
Drywall acceptance stirs union clash in Chicago. p25 ... Jan 6
AFL-CIO strikes back at open shop in Lansing, Mich. p57 ... Jan 6
Electrical union loses bid for monopoly. p80 ... Jan 13
Bias issue smolders; union investigations. p71 ... Jan 20
Union grab for more strike power is costly to the industry. CW p61 ... Jan 27
Too many unions in the U.S., Britisher says. p170 ... Jan 27
Showdown begins on union bias in St. Louis. p146 ... Feb 10
Who's to blame in union tests? RC p32 ... Feb 10
District 50 renews fight on situs picketing bill. p154 ... Feb 17
Unions reject wage restraint,*. table. p13 ... Feb 24
NLRB protects non-union subcontractor in Fargo, N.D. p309 ... Mar 17
Missouri seeks state union-shop ban. CW p11 ... Apr 21
AFL-CIO seeks President's help on Taft Hartley violations. p234 ... May 26
AFL-CIO looks to Senate to restore jobless pay standards. p234 ... May 26

(Continued)

(Continued)

U.S. Court rebukes plumbers' union on bias. p306 Jun 16
What is equal opportunity? Unions must bend. e p84 Jun 23
Boycott ban stymies unions. p58 Jun 30

LAKES
Stiff rules for Lake Michigan pollution. p27 Jan 13
Great Lakes locks remodeled,*, diag. p18 Mar 3

LAND CLEARING, LANDSCAPING. see: HIGHWAY DESIGN; SOIL

LAND DEVELOPMENT, see: CITIES; PLANNING

LANDSLIDES, see: ACCIDENTS, DISASTERS
see also: SOIL

LEASE PURCHASE, see: BUILDINGS • Federal

LEGAL DECISIONS (Werbin)
Liability to a sub's employee, N.Y. p146 Jan 27
Breach of contract damages, N.Y. p146 Jan 27
Claims for extra work may be limited, N.Y. p146 Jan 27
Court explains approach to contract ambiguities, N.Y. p146 Jan 27
Surety bond covers supervisor. p117 Feb 17
Oral extra work orders are held valid by court, Pa. p117 Feb 17
Negligence is hard to escape, N.Y. p118 Feb 17
One may waive his right to challenge arbitration, N.Y. p118 Feb 17
Notice "given" on date mailed. p270 Mar 17
A contract may provide that no liens be filed, N.Y. p271 Mar 17
Funds for improvements may constitute a trust, N.Y. p272 Mar 17
Mechanics lien may be defective on its face, Onondaga County, N.Y. p274 Mar 17
An arbitration clause fails if unreasonable, N.Y. p276 Mar 17
Court bars lien action of foreign corporation, Montana. p278 Mar 17
Court explains finality of engineer's decision. p280 Mar 17
Contractor may sue on contract or ask for fair value, N.Y. p180 Apr 7
Surety held on its performance bond, N.Y. p180 Apr 7
Statute of frauds makes some contracts worthless. p62 May 19
When can a sub get paid? p194 May 26
Court has jurisdiction over foreign corporation. p195 May 26
Settlements may be conclusive. p197 May 26
Licensing laws affect out-of-state contractors. p197 May 26
Local code violated: licensing law was not a bar to pay, D. C. p198 May 26
Lien wordage is strictly applied, Queens County, N.Y. p198 May 26
Contract not to compete fails, New York. p265 Jun 16
A proposed bid was not a subcontract, D. C. p268 Jun 16
All parties must apply for declaratory judgment, Connecticut. p270 Jun 16
Contractor recovers loss that flowed from strike. p272 Jun 16

LEGAL DEVELOPMENTS, see also: LEGISLATION AND FINANCE
Court halts Con Ed's Storm King pumped storage plant on the Hudson near Cornwall. p16 Jan 6
Canadians end feud on Churchill Falls project in Newfoundland. p16 Jan 6
No action taken on appeal for Hudson River pumped storage. CW p7 Jan 20
Owner sues Architect-Engineer for $7 million in Philadelphia apartment case. p15 Jan 20
Planners win licensing battle in New Jersey. p18 Feb 3
Single contract gains a point at Illinois Supreme Court. p53 Feb 3
Libel suit in Alaska earthquake's wake. p56 Feb 10
Salt Lake City bid depository case reaches U. S. Supreme Court. CW p47 Feb 10
Seattle court house goes to court: job tops estimate by 180%,*. p69 Feb 24
Calif's settlements net $7.2m between Sacramento Utility, electrical suppliers and Kiewit. p70 Feb 24
Suit filed against D. C. Stadium constructors for poor quality materials. CW p11 Mar 24
Michigan officials sue school bond opponents. p12 Mar 31
California Supreme Court upheld right for colleges to retain private architects. B p78 Apr 7
No punitive damages on Michigan school bonds court case. p78 Apr 7
Court approved plan keeps bankrupt Calif firm at work. p81 Apr 14
Engineer charged with practicing architecture: professional conflict simmers. p78 Apr 21
Cleveland sues over sinking street. p26 Apr 28
Ohio church operated hospital bonds cleared by court. p81 Apr 28
Contractor quits Colorado water tunnel job; sues. p233 May 26
Supreme Court to review Philadelphia carpenters case. Landrum-Griffin law involved. CW p67 Jun 16
Maryland contractor fired for fatal ditch collapse. p300 Jun 16
U.S. Court rebukes plumbers union on bias. p306 Jun 16

LEGISLATION & FINANCE (State & Local)
see also: CONSTRUCTION BUSINESS
Controversy on engineers as directors in Water Dept spreads to Calif legislature. p26 Feb 17
Californians approve $1.4 billion bond issues. p77 Jun 16

LIGHTING, see also: PRODUCTS
G.E. improves color rendition for mercury vapor lamp. p48 Mar 24
Diamond drills help install runway lights,*. p35 May 5
Pancake lights on Garden State Parkway. B p27 May 12

LOCKS, see also: DAMS; RIVERS
Soo Lock, Poe Lock replacement: tight work area at Great Lakes connectors, diag,**. p18 Mar 3
New Barkley Lock on Cumberland River replaces obsolete locks,*. p13 Mar 31
Poe Lock, Michigan to be completed soon. RC p33 Apr 7

LUMBER
Lumber standards dead unless revised this year. p28 Feb 17
Lumber: who will set standards? e p176 Feb 17
Further delays on lumber standards. B p25 Mar 10
Lumber Committee fails again in vote on standards. CW p11 Apr 28
Crackdown expected on fraudulent grade marking of softwood lumber. WO p17 May 12

M

MANAGEMENT & PRODUCTIVITY
see also: SPECIFICATIONS & STANDARDS
BUILDING DESIGN; •Prefabs
CPM speeds Seabee homebuilding in Rota, Spain,*. p121 Jan 27
Engineers as managers. e p188 Jan 27
Graphic aids translated computer-calculated CPM networks. p30 Mar 3
Index card system of code approved products. p19 Mar 10
Engineers as managers. RC p33 Mar 17
Engineers Joint Council and Department of Defense discuss standard technical vocabulary. B p21 Mar 24
Turnkey bargain for Key West on desalter purchase. p16, Mar 31 and RC p16 May 26
CPM system for Vietnam constructors. CW p67 Apr 7
The Producers' Council to conduct management training program. B p21 Apr 21
Illinois dam work requires CPM. p200 May 26
AASHO to conduct management training institutes at the University of Mississippi. B p21 Jun 23

MAPPING, see: SURVEYING AND MAPPING

MARINAS, see: PORTS AND HARBORS

MASONRY, see: BRICKS, MASONRY

MATERIALS, see: EQUIPMENT & MATERIALS
see also: CONCRETE, STEEL, etc.

MEETINGS
Highway Research Board's annual meeting in Washington, D.C.: transportation research shifts gear. p70 Jan 27
National Constructors Asso. elects G.W. Jones as president,*. p72 Jan 27
American Concrete Paving Association and Portland Cement Association meet at seminar for updating paving methods. p16 Feb 3
Steel research rolls, concrete crawls, ASCE Miami conference finds. p53 Feb 10
First International Conference on Urban Transportation meets in Pittsburgh. p51 Feb 10
Second Labor-Management forum held in San Francisco. p158 Feb 17
Construction Equipment Exposition & Road Show to be held in Chicago 1969. CW p7 Mar 3
Am Road Builders' 64th convention in Denver discusses beauty and research,*. p14 Mar 3
Am Concrete Institute annual convention in Philadelphia takes action on standards,*. p86 Mar 17
AGC's 47th convention in Washington hears the jingling of $billions. p15 Mar 24
Industrial, Institutional and Commercial Building Conference in Cleveland. p14 Mar 31
Chicago conference on construction costs. p23 Mar 31
National Conference on Solid Wastes Management in Berkeley, Calif. p20 Apr 14
Earthmoving Industry Conference gathers in Peoria, Ill., for 17th annual meeting. p20 Apr 14
New Orleans symposium on performance concept in specs. p72 Apr 7
National Hwy Users Conference meets in Washington, debated road funds. p16 Apr 21
Am Institute of Steel Construction meets in Boston for 18th annual national engineering conference. p18 Apr 21
NAHB directors meeting seeks credit controls. p77 Apr 21
National conference in Washington D.C. discusses labor shortages. p85 Apr 28
Conference of bldg industry leaders in Washington disagrees on need for national bldg code. p24 Apr 28
Consulting Engineers Council meets in Tulsa, Okla. p87 May 12
San Francisco symposium on future of transportation and new vehicles. p26 May 12
Charlottesville, Va., conference on statistical quality control methodology in hwy and airfield construction. p25 May 12
Foreign Construction Conference planned in Washington. CW p15 May 12
Building Research Institute meets in Washington, discusses building systems. p26 May 19
Hwy officials of North Atlantic states meet in Maine. p76 May 26
ASCE's water conference in Denver. p74 May 26
Am Water Works Asso 86th annual conference urges Interstate Water Authorities. p15 Jun 2
Construction Specifications Institute Boston meeting: specs writers urged to automate. p21 Jun 2
Congress of Precast Concrete Industry in London. p16 Jun 2
National Plastics Conference eyes building field. p77 Jun 16
International Commission on Large Dams meets in Rio de Janeiro, seeks reasons for dam failures. p78 Jun 16
Chicago Building Congress meeting discusses profitless prosperity,*. p298 Jun 16
Contractors and consultants meet with federal officials on foreign job problems,*. p15 Jun 23
Tarrytown, N.Y. assembly of engineers and architects discuss heating. p18 Jun 23
Fifth congress of International Federation on Prestressed Concrete meets in Paris. p20 Jun 23
Engineering educators meet in Pullman, Wash to discuss goals. p11 Jun 30

METRIC SYSTEM, see: SPECIFICATIONS & STANDARDS

MINING, see: SOIL

MISSILES, see: SPACE & MISSILES

MODELS, see: SPECIFICATIONS & STANDARDS
BUILDING DESIGN

MODULES, see: SPECIFICATIONS & STANDARDS
see also: RESEARCH & TESTS; BUILDING DESIGN

MONORAILS, see: RAILROADS; TRANSPORTATION

MONUMENTS, see: BUILDINGS

MORTGAGES, see: HOUSING

MOVING, see: TRANSPORTATION

N

NASA, see: SPACE

NATIONAL Associations, Societies etc. – see subject

NAVY, NAVIGATION, UNDERWATER CONSTRUCTION
Roadbuilding equipment sent to Peru up the Amazon, map. p16 Jan 20
Seabees build homes in Rota, Spain; CPM used,*. p121 Jan 27
British liner to be used as college dormitory in Holland. B p18 Feb 3
Japanese tanker to be world's largest ship. B p30 Feb 17
Navy Bureau of Yards and Docks to be known as Facilities Engineering Command. CW p11 Mar 10
BuRec engineers turn frogmen,*. p84 Mar 17
Seabees and construction battalions may be called up for Vietnam. WO p79 Mar 17
Hush-hush Navy construction in Thailand. CW p11 Mar 24
Navy starts construction of big bldg at McMurdo Station, Antarctica. p17 Mar 24
BuDocks cost-plus contract contains incentive award. p13 Mar 31
BuDocks new contract system. e p234 Apr 7
Chain becomes saw to demolish sunk drydock in Maryland,**. p39 Apr 14
Seabees need construction men. B p21 Apr 21

NOISE CONTROL, see: ACOUSTICS

NUCLEAR PHYSICS, see: ATOMIC ENERGY

O

OFFICES, see: BUILDINGS

OFFSHORE PLATFORMS
Floating drill platform tilts into position in Japan,*, diag. p98 Jan 27

OVERPASSES, see: BRIDGES

P

PARKING, see: BUILDINGS; CITIES; PAVING; TRAFFIC

PAVING, see also: CONCRETE; HIGHWAYS; PRODUCTS
Navy scrans its round runway design,*. p40 Jan 20
Sand oil foam to patch runways. p39 Jan 20
Antiskid for runways and hwys tested by Air Force in Calif,*. p39 Jan 20
Concrete pavers updated on methods at Illinois meeting. p16 Feb 3
Concrete pavements can be thinner.*, tables, graphs. p76 Feb 17
Paving 5 miles in Connecticut. p37 Mar 3
Four lanes paved in one pass in Calif,**. p30 Mar 10
Bumpcutters make old pavement better than new at half the cost,**. p28 Mar 10
Bridge deck flooring never requires painting. p212 Mar 17
Asphalt Institute adds 10 men to honor roll. p262 Mar 17
Port of New York Authority to test runway pavements. CW p7 Mar 31
Roll asphaltic concrete hot and dry,*. p144 Apr 7
Treated pavement bases influence designers. p86 Apr 7
Bumpcutters make groovy, glaring surface on the San Bernardino Freeway,*. RC p6 Apr 28
Lower temperature for base courses recommended by the Asphalt Institute. B p28 Apr 28
Diamond drills help install runway lights,*. p35 May 5
Fast slipform paver in California. CW p11 May 5
Views on treated bases for pavements. RC p8 May 12
Vacuum lifts asphaltic pavement sections,*. p166 May 26
Thin bituminous macadam stops reflection cracking: runway experiment in Maine. p164 May 26
Do studded tires damage pavements?* p113 May 26
Welded studs skidproof bridge decks,*. p39 Jun 2

PIERS, see: BRIDGES; CAISSONS; PORTS

PILES, see also: PRODUCTS; SOIL
Wall of piles holds out water for Helsinki bldg,*. p101 Jan 27
Seven tricks to speed piledriving,**. p110 Jan 27
Questions and answers on concrete piles. RCs p48 Mar 17

PIPES, see also: PRODUCTS
FPC to control safety in gas pipelines. WO p63 Jan 27
Transcontinental Gas Pipe Line Corp. plans 3-year construction program. B p30 Feb 17

Hawaii irrigation pipeline unit prices. p165 ... Mar 17
Copper tubing prices increase. CW p11 ... Apr 21
Plastic pipe approved for FHA single-family homes. CW p11 ... Apr 28
Oil pipeline from Trieste through the Alps to Ingolstadt,**. p90 ... May 26

PLANNING & ENVIRONMENT
see also: ARCHITECTURE; CITIES; ZONING
Planning, utility vs beauty. RC p4 ... Jan 6
Planners win licensing battle in New Jersey. p18 ... Feb 3
Regional planning program for half of Libya. B p27 ... May 12
Turn flood-prone areas into parks. e p252 ... May 26
New park building program. WO p9 ... Jun 2
Environmental designers: debate fosters progress. e p84 ... Jun 23

PLASTICS, RUBBER
Rubber sheet smooths concrete ceiling,*. p122 ... Jan 27
Polivinyl chloride makes cheap ceilings in Sweden,**. p135 ... May 26

PLYWOOD, see: LUMBER

PORT OF NEW YORK AUTHORITY
To test runway pavements. CW p7 ... Mar 31
PNYA retains contractor-consultant for World Trade Center job. RC p33 ... Apr 7

PORTS AND HARBORS
*Improvements at Port of Newark, N. J. p84 ... Feb 10
Construction debris substitutes for rockfill in San Fran port dike,**. p42 ... Feb 17
Artificial island planned in Kobe Harbor, Japan. B p19 ... Feb 24
Cornwall on Hudson: pumped storage legal battle continues,*. p21 ... Mar 31
Chain becomes saw to demolish sunk drydock in Maryland,**. p39 ... Apr 14
Philadelphia Port plans two cargo terminals. B p21 ... Apr 21
Australian ports of Melbourne, Sydney and Newcastle to be modernized. B p28 ... Apr 28
Newport News Co. creates land from James River by filling behind ship split to make jetty,*. p163 ... May 26
Oakland, Calif. to modernize shipyards. CW p11 ... Jun 9
Anchorage, Alaska wharf to be expanded: unit prices- p136 ... Jun 16

POWER. see also: ATOMIC ENERGY; DAMS; RIVERS; UTILITIES
Cuero Project on San Guadalupe River proposed by BuRec. B p25 ... Jan 6
Dayton Power and Light to build coal-fired steam generating station in Ohio. B p27 ... Jan 13
American Electric Power System to expand facilities. B p27 ... Jan 13
No action taken on appeal for Hudson River pumped storage. CW p7 ... Jan 20
Los Angeles starts $750m water and power 5-year construction job. p13 ... Jan 20
FPC to control safety in gas pipelines. WO p63 ... Jan 27
Oklahoma licensed for pumped-storage project. B p18 ... Feb 3
U. S. and Canada prepare to build Dickey-Lincoln School hydroelectric project. B p18 ... Feb 3
Congress investigates November blackout in Northeastern states. p27 ... Feb 17
NY State Power Authority plans to build pumped-storage plant on Lake Erie. B p30 ... Feb 17
Additional 2.4m kw in Appalachia. B p30 ... Feb 17
New FPC commissioner to probe construction. WO p9 ... Mar 3
Yuba River hydro project may happen. p87 ... Mar 17
American Electric Power Co. to build three coal-fired plants. B p21 ... Mar 24
San Juan Chama project, New Mexico, unit prices. p50 ... Mar 24
FAA to supply emergency generators to 50 airports- B p21 ... Mar 24
Pumped storage battle continues: FPC vs Con Edison on Cornwall plant on the Hudson,*. p21 ... Mar 31
Consumers Power Co., Jackson, Mich., plans record budget. B p78 ... Apr 7
Philadelphia Electric Co. builds Muddy Run pumped storage on the Susquehanna River,**. p90 ... Apr 7
Pumped storage: simple theory becomes a complex project,**. p90 ... Apr 7
Seneca pumped storage project to be built on Allegheny River,*. p17 ... Apr 14
Pennsylvania Electric installs underground service. B p21 ... Apr 21
FPC recommends prettier power lines. WO p13 ... May 5
Extra high voltage power net planned for Appalachia and Mid-West, map. p21 ... May 5
Errors in April story on Muddy Run Pumped-Storage. RC p33 ... May 26
New hearings on Con Edison's Cornwall on Hudson's pumped-storage plans. CW p67 ... May 26
Hydro and irrigation costs and indexes. p106 ... Jun 16
Saline Pumped Storage project, Tulsa, Okla.: unit prices. p138 ... Jun 16
Dept. of Interior finds gross underdevelopment in Moores Ferry pumped storage project, Virginia. CW p7 ... Jun 30

●Foreign
International development loans for water and power jobs in six countries. p101 ... Jan 27
Africa: Qattara Depression irrigation and hydro scheme planned. CW p21 ... May 19
Australia completes Snowy Mountain project, plans new one on the Gordon River in Tasmania. B p28 ... Apr 28
Australia: Snowy Mountain project zips along in its 17th year,**, map, diags. p28 ... Jun 2
Brazil's Jaguara hydro on the Rio Grande to get loan. p28 ... Mar 24
Canadians end feud on Churchill Falls project in Newfoundland. p16 ... Jan 6
Canada: Mactaquac power on St. John River will brighten New Brunswick's industrial boom,**. p22 ... Feb 3
Canada: Manitoba goes north for big power, map. p13 ... Mar 3
Finland to get hydroelectric plants and two dams. B p18 ... Feb 3
Ghana: No more Russian technicians to work on Bui Gorge hydro projecton the Black Volta River. B p21 ... Jun 23
Japan has to spend $14.7 billion to develop its power capacity. B p18 ... Feb 3
Mexico's electricity to benefit through loan program. p174 ... Mar 17
Peru changes contractors on Mantaro River hydro job. p56 ... Feb 10
Peru's Mantaro hydro: Director of Electroconsult, Milan, Italy comments on his firm's job. RC p16 ... Jun 16
Portugal and Jamaica get World Bank loans for electric power. p47 ... Jun 23
Spain gets loan for thermal power plant. p168 ... Jun 16
Switzerland: Gas kills 17 in Maggia hydro tunnel. p19 ... Feb 24
Swiss oil-fired power plant built up-hill,*. p32 ... Jun 30
Yugoslavia harnesses river for hydro projects,**, map. p26 ... Mar 24

PRODUCTS – see PRODUCT MANUFACTURERS p17

PUBLIC WORKS, see: Project in question
see also: CONSTRUCTION BUSINESS; ECONOMY

PUMPS: see also: PRODUCTS
Pumps to fight ocean intrusion in Los Angeles. p13 ... Jan 6
Pumps at work to avert flood on Mexico-Calif border,*. p13 ... Jan 6
Pump test makes Providence River travel in circles,*. p17 ... Feb 3
*Dos Amigos pumping station. p121 ... Feb 10

R

RADAR, RADIO, see: COMMUNICATIONS
see also: PRODUCTS

RADIOACTIVITY, RADIATION, see: ATOMIC ENERGY

RAILROADS & SUBWAYS, see also: TRANSPORTATION
Kansas rail relocation draws keen competition. p35 ... Jan 6
Canada: Alberta begins new rail line, map. p25 ... Jan 13
Commuter rail loop planned around Tokyo. B p25 ... Jan 20
British contractors rebuild rails sabotaged by Lawrence of Arabia,**, map. p30 ... Feb 3
South African railroad proposed. B p57 ...
Prestressed concrete crossties for St. Louis – San Francisco railway. B p19 ... Feb 24
Monorail studied in Manchester, England. B p25 ... Mar 10
East-West subway opens in Toronto. B p25 ... Mar 10
Australia builds railroad on west coast for iron ore transport,**. p173 ... Mar 17
NYC East River subway tunnel job hits another snag; unions ask for construction methods comparison. p306 ... Mar 17
Japan to extend high-speed rail line. B p21 ... Mar 24
Canadian's to improve Yukon and Northwest Territory's rail facilities. B p21 ... Mar 24
Southern Pacific plans new rail line in California. p21 ... Mar 24
Railroad sets tracks aside, lowers bed for higher loads,*. p134 ... Apr 7
San Francisco to improve Municipal Railway System. CW p11 ... May 5
Long Island Rail Road to use Transit Authority tracks. CW p11 ... May 5
Pennsylvania Railroad to experiment with 150-mph train from New York to Washington. B p27 ... May 12
Chicago Transit plans rail extensions on highway median. B p27 ... May 12
Los Angeles gets access to funds for rail transit. p231 ... May 26
Monorail between terminal and parking lots at Houston airport,*. p150 ... May 26

RECLAMATION, see: SOIL; WATER RESOURCES

RESEARCH AND TESTS
see also: SPECIFICATIONS AND STANDARDS
Federal dollars for construction research. WO p19 ... Jan 13
Sand-oil foam to patch runways. p39 ... Jan 20
Antiskid for runways and hwys tested by Air Force in Calif,*. p39 ... Jan 20
Research on sober alcoholics. B p25 ... Jan 20
Transportation research shifts gears. p70 ... Jan 27
Romualdi heads transit research at Camegie. p52 ... Feb 10
Steel research rolls, concrete crawls, ASCE Miami conference finds out. p53 ... Feb 10
T-beam design strengthens rafters,*. p53 ... Feb 17
Coated land collects water, hydrologists find in New Mexico tests. p53 ... Feb 17
Ultrasonic testing device eliminates concrete coring. p92 ... Feb 17
Research fellowships awarded by American Institute of Steel Construction. B p30 ... Feb 17
Composite studies at Lehigh Univ aid beam design,*, diags. p202 ... Mar 17
More research for water controls. WO p13 ... Mar 24
National Academy of Science urges federal experiments in waste control p72 ... Apr 7
Tornadoes studied in Catholic Univ of America lab. p21 ... Apr 14
Bldg Research Advisory Board to report on performance concept. p73 and e p234 ... Apr 7
Building Research Institute discusses building systems. p26 ... May 19
Hwy Research Board on studded tires and pavement damage,*. p113 ... May 26
Vacuum lifts asphaltic pavement sections,*. p166 ... May 26
Coating system tints, patterns aluminum. p166 ... May 26
Study updates nation's backward bathrooms, diags. p24 ... Jun 2
Wind tunnel will test scale model of buildings. p170 ... Jun 16
Submerged mortar mats control waterway erosion. p170 ... Jun 16

RIVERS, see also: DAMS; POWER; WATER RESOURCES
Puerto Rico to start flood control program. B p19 ... Feb 24
Voters in Phoenix, Arizona, disapprove flood control construction. p17 ... Apr 14
Basin approach to river pollution. e p104 ... May 19
Rivers can't be deepened any more for heavier oil barges. WO p69 ... May 26
Albuquerque fights flash floods,*, map. p109 ... May 26
Flood plain zoning. e p252 ... May 26

Amazon River
Roadbuilding equipment sails to Peru up river. p16 ... Jun 20

Arkansas River
Development program will continue,*. p114 ... Feb 10

Columbia River
Basic Inter-Agency Committee against Hanford nuclear power plant high temperature wastes. B p21 ... May 5

Cumberland River, Tenn
Obsolete lock blasted, new Barley Lock takes over,*. p13 ... Mar 31

Des Plaines River
Restrict construction in flood plain, Corps of Engineers' urges. CW p11 ... Apr 21

Hudson River
Wall of air bubbles to reduce salinity. p18 ... Mar 10
Helicopter takes water samples,*. p148 ... May 26
Basin development urged by Dept of Interior. p76 ... Jun 16

Illinois River
Electronic sensors gage river conditions. p150 ... Apr 7

McKenzie River
Weyerhaeuser plant will obey Oregon State and clean effluent. p16 ... Mar 3

Mississippi River
Towboats break ice jam,*. p17 ... Mar 10

Morava River, Yugoslavia
Dikes and 18 dams to control floods. B p28 ... Apr 28

Nelson River, Canada
Manitoba to develop big power project, map- p13 ... Mar 3

Niagara River
Falls may close for a facelifting,*. diag. p16 ... Feb 24
Corps of Engineers investigated improvement of the American Falls. B p78 ... Apr 7

Orange River, South Africa
Afro-French venture wins first job. p162 ... Jun 16

Peace River
Labor costs on hydro project soar. p236 ...

Pearl River
Feasibility study of waterway link between east and west Pearl Rivers. B p57 ... Feb 10

Potomac River
Long range beauty plans knock down Seneca Dam project. p26 ... Jan 13
Automatic sampling to monitor water quality. B p79 ... May 26

Providence River
Travels in circles while pumps are tested,*. p17 ... Feb 3

Rhine River, Europe
Controversy clouds future of $100m development, map,**. p20 ... Feb 24
German joint venture stops pollution, map. p181 ... Mar 17

Rhone River, France
Development enters final stage,*. p33 ... Jun 30

Rio Grande
Canal to divert salty runoff. B p27 ... Jan 13

Rio Grande River
Albuquerque fights flash floods,*, map. p109 ... May 26

Susquehanna River
Basin development urged by Dept. of Interior. p76 ... Jun 16

Trebinjica River, Yugoslavia
Harnessed for hydro projects,**, map. p26 ... Mar 24

Yuba River
Agency wants right to negotiate contract. p15 ... Mar 3
Project may finally happen. p87 ... Mar 17
Yuba county to negotiate with Perini. CW p7 ... Mar 31
Project doubtful, Perini's bid may not be accepted. CW p67 ... Apr 7
Joint venture headed by Perini will build the project. CW p11 ... Apr 14
Construction job starts at last. p20 ... Apr 21
Bonds sold for river project. B p21 ... Jun 9

ROCKS, see: SOIL
see also: EXPLOSIVES

ROOFS, see also: PRODUCTS
Swedish rod-reinforced wood beamed roof collapses,*. p15 ... Jan 6
Domed stadiums "on the mark",*. p68 ... Jan 27
Hyperbolic paraboloid for McGraw-Hill's book center in California,*. p109 ... Jan 27
AIA to sponsor design manual for roof systems. B p18 ... Feb 3
Geodesic dome for Carborundum plant in Niagara Falls,*. p26 ... Feb 17
Cables support ten acre roof for Tulsa exposition center,*. p37 ... Feb 17

(Continued)

(Continued)
Low cost hyperbolic paraboloid roof will be disassembled easily in Mexico City,*. p68 Feb 17
Timber framed roof collapses under snow in Sweden,*. p17 Feb 24
Lift slab roof for Missouri Savings office at Clayton,**. p24 Mar 24
Supermarket roof collapse cause investigated in Raleigh, N.C.,* p72 Apr 7
Plastic domes roof Florida gas stations,*. p132 Apr 7
Jacked roof halves hangar cost in Glasgow, Scotland,*. p32 Apr 14
Sheet steel roof spans 252 ft over arena at Albuquerque Univ,*, diag. p22 Apr 14
Catenary roof will span 800 ft, new Cotton Bowl in Dallas,*. p19 May 5
Wideflange precast tees form walls and roof for Mass. warehouse,**, diag. p106 May 26
Ribbed deck forms radial roof for Pasadena school gym,*. p23 Jun 9
Space gain solves uplift problem in 404 ft cable roof, Madison Square Garden,**, diag. p26 Jun 9
Skating rink dome marries steel and prestressed concrete,**. Cover and p22 Jun 30

RUNWAYS, see: AIRPORTS; PAVING

S

SAFETY, see: ACCIDENTS & SAFETY; PRODUCTS

SANITATION, see: HEALTH; SEWAGE; WATER POLLUTION

SCANDALS, see: ETHICS

SEABEES, see: NAVY

SEISMOLOGY, see: SOIL
see also: INSTRUMENTS; PRODUCTS

SEWAGE, see also: WATER POLLUTION; PRODUCTS
Public Health Service sewer study grants. B p57 Feb 10
Isolating sewage from strom water, map, diag,**. p26 Mar 31
Storm sewers and the pollution problem. e p234 Apr 7
Sewer works are modest job generators; labor requirements for various types of construction. p82 Apr 21
Sewerage needs are still huge. WO p69 Jun 16
Sewer line and treatment plant cost indexes. p108 Jun 16
Congress to give more money than asked for sewage plants. WO p13 Jun 23
Urban Renewal Administration urged to enforce storm and sanitary sewer separation. p12 Jun 30

• American

California
Storm drain unit prices. p56 Mar 10
Los Angeles storm drain unit prices. p166 Mar 17

Illinois
Chicago sewer tunnel blast kills worker. B p25 Jan 6
Open-cut sewer in Chicago unit prices. p69 May 12
Sewage storage caverns in Chicago. p77, May 26
Skokie sewage pipe inspection job: heat kills four. p18 Jun 23

New York
*Sewage plant, Mamaroneck, N.Y. p125 Feb 10
New York City North Branch Interceptor sewer, unit prices. p40 Jun 30

North Dakota
Bismarck and Mandan, N. D., to treat sewage. CW p61 Jan 27

Pennsylvania
Sewage to be known as wastewater in Philadelphia. p17 Feb 3

Vermont
Interceptor sewer on the Dog River in Northfield; unit prices. p132 Jun 16

Virginia
McLean, Va, retired sewage plant opens as swimming pool,*. p101 May 26

Wisconsin
Milwaukee suburbs storm sewers, unit prices. p48 Jan 20

SHELTERS, see: BUILDINGS

SHIPWAYS, see: CANALS; PORTS & HARBORS

SKYSCRAPERS, see: BUILDINGS

SLUM CLEARANCE, see: CITIES; HOUSING

SMALL BUSINESS ADMINISTRATION, see: ECONOMY

SNOW, see: WEATHER

SOCIETIES, see: SUBJECT, e.g. ENGINEERING, RESEARCH, etc.

SOIL AND FOUNDATIONS
see also: PRODUCTS; WEATHER
Seismic warning in South Calif. affects building code. CW p19 Feb 17
Landfill operation: garbage compressed and buried,*. p196 Mar 17
Chemical wastes may generate quakes in Colorado. p14 Mar 31
Earthquake safety for San Fran Bay transit system,**, diag. map. p24 Apr 21
Seismic studies aid tunnel design in Seattle. p44 Apr 28
Pipeliners fight karst formations on Italian-German oil line,**. p90 May 26

•Dredging
Dredging Wilmington, N. C. harbor, unit prices. p48 Jan 20
Big dredge works on New Jersey beach,**- p30 May 12

• Earthmoving, Excavating
Rolling surcharge displaces muck to stabilize Michigan hwy,**. p28 Jan 13
Landfill found for I-71 quicksand in Cleveland. p28 Feb 17
Vibrators help sticky earthmoving job on Oroville Dam, Cal. p194 Mar 17
Minnesota runway excavation unit prices. p63 May 19
Soil and rock problems on Tennessee road construction through Appalachians,**. p50 May 19
Inexcusable trench cave-in. e p104 May 19
New land created from James River by filling behind ship split to make jetty,*. p163 May 26
Wrong sponsors of the Earthmoving Industry Conference. RC p33 May 26
Levee construction in San Joaquin County, California unit prices. p43 Jun 2
Montreal foundation excavation: shoring collapse kills three,*. p14 Jun 30

• Erosion, Shore protection
Construction debris substitute for rockfill in San Fran port dike,**. p42 Feb 17
Louisiana levee protection unit prices. p43 Feb 24
Dredge and pipes feed sand on New Jersey beach,**. p30 May 12
Reclaimed land along Long Beach, Calif. shoreline will be developed as a recreation area: unit prices. p131 Jun 16
Erosion controlled by mortar filled nylon mats. p170 Jun 16

• Foundations
Floating drill platform to build Japanese bridge foundation,*, diag. p98 Jan 27
Wall of piles holds out water for Helsinki bldg,*. p101 Jan 27
Difficult foundation completed for NYC office over rail tracks,*. p28 Feb 17
Upside down tower foundation for San Francisco bank bldg,**. p22 Feb 24
Surcharging big warehouse floor saves PNYA $1m on Port Newark job,**. p22 Mar 3
Rock bolts anchor basement slab against uplift, Harrisburg, Pa.,*. p37 Mar 10
Basement slab tied down to counter hydraulic uplift,*. p181 Jun 16

• Stabilization, Treatment
Coated land collects water, hydrologists find in New Mexico tests. p53 Feb 17
Electro-osmosis stabilizes Ohio dam clay foundation,**. p36 Jun 23

SONIC BOOM, see: AIRCRAFT

SPACE AND MISSILES
Apollo steel complex in Florida names outstanding civil engineering achievement. CW p47 Feb 10
*Vehicle Assembly Building, Cape Kennedy, will be world's largest. p106 Feb 10
U.S. builds tracking post in Australia for satellites. p37 Apr 21
Design proposals requested for Communications Satellite Corp. station in W. Va. CW p15 May 12
No major construction for new NASA programs in sight. WO p69 Jun 16
Goldstone antenna in Mojave Desert probes space. p83 Jun 16

SPECIFICATIONS, STANDARDS
see also: BUILDING CODES; RESEARCH & TESTS; LUMBER
New concrete standard promises shorter specs,*. p86 Mar 17
Performance standards posed as cure for "or equal" clause in bldg specs. p14 Mar 31
Curtain wall specs re-examined. p72 & e p234 Apr 7
Program for extending use of performance standards. p72 & e p234 Apr 7
New FHA chief for technical standards. WO p13 Apr 21
Construction Specifications Institute moves to new quarters. B p21 Apr 21
Plastic pipe approved for FHA single-family homes. CW p11 Apr 28
IBM ready for metric system. B p21 May 5
Specifications writers urged to automate at Boston CSI convention. p21 Jun 2
Society of Aeronautical Weight Engineers urges study of speedy conversion to metric units. B p21 Jun 23

STEEL
Steel price fight sparks talk of direct government controls. WO p9 Jan 6
Mill welds steel plate into beams. P p34 Jan 6
Structural steel prices move up slightly. p74 Jan 13
American Institute of Steel Construction sponsoring lectures on steel space frames in 60 cities. B p25 Jan 20
No worry about steel price boost. p69 Jan 20
Steel research rolls, concrete crawls, ASCE Miami conference finds out. p53 Feb 10
Research fellowships awarded by American Institute of Steel Construction. B p30 Feb 17
AISC's Excellence Competition. B p121 Mar 24
Steel monopoly likely in Britain. p73 Apr 7
Compatible Design Systems is a new firm offering steel components for School Construction Systems Development. CW p11 Apr 14
AISC Boston conference: steel frame for high rise apartment; high and dry floor system, diag. p18 Apr 21
Diamond shaped outer frame for Alcoa Bldg, San Francisco, is a difficult steel erection job,**. p22 Apr 21
Bethlehem Steel bids winning bridge over Narragansett Bay, R.I.,*. p20 Apr 28
Talk on steel imports curb. WO p9 Jun 2

STRATEGIC AIR COMMAND, see: SPACE

STRUCTURAL FAILURES, see: ACCIDENTS AND FAILURES

SUBWAYS, see: CITIES; RAILROADS; TRANSPORTATION

SURVEYING AND MAPPING
War on poverty aids surveyors: crew training by AFL-CIO. p79 Jan 13

T

TAXATION & TARRIFS, see also: ECONOMY
Will booming economy bring tax increase,*? p85 Mar 17
Taxes and inflation. e p326 Mar 17
German pollution control tax to be studied. p19 Mar 24
Tax boost supporters reinforced,*. p19 May 12
Los Angeles County to levy taxes for rapid transit system. CW p11 Jun 9
Tax break gains for self employed. p299 Jun 16
All favors user taxes. RC p40 Jun 16
No tax hike for Vietnam war. WO p69 Jun 16
Treasury clips tax exempt industrial aid bonds. p67 Jun 23

TELEVISION, see: COMMUNICATIONS
see also: PRODUCTS

TENNESSEE VALLEY AUTHORITY
Plans nuclear power plant on Browns Ferry site in Alabama. p17 Feb 3
Controls both concrete and a river at Nickajack Dam site,**. p84 May 26
Orders two nuclear reactors. CW p11 Jun 23

TOLLS, see: BRIDGES; HIGHWAYS

TRANSPORTATION, see also: HIGHWAYS; RAILROADS
Bay Area Rapid Transit job – see: CITIES, San Francisco
Plans for NYC transport consolidation. B p25 Jan 6
DeLeuw, Cather of Chicago get rapid transit contract for Seattle and Wash., D. C. CW p17 Jan 13
Transportation research booms. p21 Jan 13
Balanced transportation system: city without subways. e p84 Jan 20
Transportation research shifts gears. p70 Jan 27
East River subway tunnel redesign cuts estimate for NY Transit Authority. p164 Jan 27
First International conference on Urban Transportation meets in Pittsburgh. p51 Feb 10
Urban mass transit: a boost and a threat. e p164 Feb 10
Romualdi heads transit research at Carnegie. p52 Feb 10
San Mateo County transit plans. B p19 Feb 24
Los Angeles transit vote looms. p70 Feb 24
Space for transit urged on Cleveland Interstate median. p16 Mar 3
Federal transportation agencies under one roof. e p96 Mar 10
President's message urges coordination of transportation. p15 Mar 10
Elevated tubes carrying small transit cars to be tried in Detroit,*. p39 Mar 24
Constantinos Doxiadis talks on the future of transportation. e p64 Mar 31
Department of Transportation would help over-all transportation policy. e p64 Mar 31
Transportation authority studied for Detroit area. p16 Mar 31
Transportation bill gets cautious approval at hearings. p76 Apr 7
Cautious and mixed reaction to idea of a new transportation department. WO p13 Apr 14
Road boom is great, but mass transportation is needed. e p100 Apr 21
San Francisco symposium on future of transportation and new vehicles. p26 May 12
Urban transit gets double boost. p20 May 12
Tri-state 20 yr program, map. p79 May 26
Planners of Detroit elevated transport should check their arithmetic. RC p6 Apr 28
Transportation Dept. in jeopardy. p16 Jun 2
Detroit bus shelters to lure motorists into city transport,**. p20 Jun 9
Genuine and strong Federal Dept of Transportation recommended. e p84 Jun 9
Toward transportation policy. e p324 Jun 16

TRUSSES, see: BEAMS, GIRDERS, TRUSSES

TUNNELS
Bay Area Rapid Transit job – see CITIES, San Francisco
Redesign cuts tunnel estimate for New York Transit Authority. p164 Jan 27
Pennsylvania Turnpike Commission awards $26m for tunnels. B p18 Feb 3
Colorado tunnel, highest in the world, to be designed by NYC firm. p16 Mar 3
Pennsylvania Turnpike tunnels unit prices, diag. p145 Mar 17
Trench type vs. shield driven method to be compared. p305 Mar 17
Japanese survey 23 mile tunnel route between two islands,*, diag. p28 Mar 31
Second Baltimore Harbor tunnel authorized. CW p67 Apr 7
Great Northern Railway tunnel bid at Libby Dam exceeds estimate. CW p11 Apr 14
Canada to build Vancouver Heights rail tunnel. B p21 Apr 21
English Channel tunnel survey report goes to British and French governments. CW p11 Apr 28
Calif water tunnels readied for bids. p19 Apr 28
Seismic studies aid tunnel design in Seattle under Union Bay. p44 Apr 28
Hwys buried in tunnel cost plenty. e p100 Apr 28
Montana rail tunnel: steel door will keep air. p23 May 12
Rampart Range Water Tunnel, Colorado: contractor quits job, sues. p233 May 26
Mole finishes 2 mile rock tunnel in New Mexico,*. p78 May 26
Australia's Snowy Mountain project rolls into 17th year of construction,*, map, diags. p28 Jun 2
Washington, D. C. expressway tunnel: unit prices. p57 Jun 23

U

UNDERPASSES, see: TUNNELS

UNIT PRICES, see: CONSTRUCTION BUSINESS

URBAN AFFAIRS, URBAN RENEWAL, see: CITIES

U.S., see: AIR FORCE; CONGRESS; ENGINEERS; NAVY, etc.

V

VENTILATION, see: AIR CONDITIONING, VENTILATION

VIADUCTS, see: BRIDGES

W

WALLS AND PANELS, see also: PRODUCTS
*Rediscovered advantages of bearing-wall construction at Pittsburgh's Pennley Park. p102 Feb 10
Wall facing falls off Tampa hotel. B p76 Apr 7
Curtain wall specs re-examined. p72 & e p234 Apr 7
Bearing wall building collapses in St. Louis. p28 Apr 28
Wide flange precast tees form walls and roof for Mass. warehouse,**, diag. p106 May 26

WATER POLLUTION, see also: HEALTH & ENVIRONMENT SEWAGE
J. M. Quigley becomes chief of federal Water Pollution Control Administration. WO p9 Jan 6
Stiff rules for Lake Michigan pollution. p27 Jan 13
Wisconsin will prevent pollution before it happens. p71 Jan 27
Wisconsin legislation assures pollution control. e p188 Jan 27
Pollution fighters busy in Chicago, Omaha, and on Canadian border. p53 Feb 10
Water pollution activities may be shuffled into Dept. of Interior. WO p21 Feb 17
Dept of Interior may get pollution control. p18 Feb 24
President Johnson escalates war on pollution; pros and cons from pollution men. p11 Mar 3
Water pollution control bill would encourage industrial-municipal sewage treatment. p16 Mar 10
Water polluters must pay. RC p8 Mar 17
German joint venture stops Rhine pollution, map. p181 Mar 17
Polluted water should make Dept of Interior a healthier agency,*. p18 Mar 24
Administration studies German water pollution control tax. p18 Mar 24
Storm water control is costly pollution fight item, map,**, diag. p24 Mar 31
Chemical wastes may be cause of Colorado earthquakes. p14 Mar 31
Storm sewers and the pollution problem. e p234 Apr 7
Solve pollution problem, feed paunch manure to cattle. p149 Apr 7
Balency-MBM reinforced concrete bearing wall system comes from Europe to U.S.**. p24 Apr 14
Will $1 billion be spent on water pollution control? WO p12 Apr 21
Congressmen object to pollution control reorganization. p18 Apr 28
PHS water engineers prefer not to move to Federal Water Pollution Control Administration. WO p13 Apr 28
Federal Water Pollution Control Administration moves lamely into Dept of Interior. p23 May 12
36 cities to fight pollution in Lake Erie. CW p21 May 19
Basin approach to river pollution. e p104 May 19
Automatic sampling to monitor Potomac River water quality. B p79 May 26

FWPCA ready for new pollution talks. p19 Jun 9
Senate discovers water pollution cure: money. p12 Jun 30
Chicago area concerned about pollution,*. p19 Jun 30
Industry find pollution abatement can be profitable,*. p19 Jun 30
Think positive on pollution. e p72 Jun 30

WATER RESOURCES, see also: DAMS; IRRIGATION; LAKES; POWER; RIVERS
Canada: Dept. of Energy and Resources will handle ground and surface waters. CW p7 Jan 6
M. E. Welch heads U.S. section of International Joint Commission (Canadian-U.S. water). B p25 Jan 6
Los Angeles starts $750m 5-year water and power supply job. p13 Jan 20
Sixth year of drought predicted for Northeast. B p25 Jan 20
BuRec plans ocean reclamation for Calif water supply. p69 Jan 27
Calif announces 1966 water projects. p72 Jan 27
Wasted water produces hydro power for San Francisco. p72 Jan 27
International development loans for water and power jobs in six countries. p101 Jan 27
Reclaimed waste water – untapped resource. e p68 Feb 3
Federal water projects trimmed by 2%, table. p54 Feb 10
1966 demands cleaner water and more of it, annual review,**. p112 Feb 10
Dept of Interior may become water activity focus. WO p21 Feb 17
California's water needs for next 20 years will be $9.2 billion. B p30 Feb 17
Coated land collects water, hydrologists find in New Mexico tests. p53 Feb 17
Houston approves water supply project, Livingston Dam to be built. p15 Feb 24
Water for Everglades National Park, Fla p12 Mar 3
Federal water agencies under one roof. e p96 Mar 10
More research for water controls. WO p13 Mar 24
Non engineers can direct California water districts. p84 Mar 17
Kentucky to participate in federal plans for more water. p84 Mar 17
Too many federal agencies involved in water and sewage grants. RC p40 Apr 7
Water resources projects proposed. WO p13 Apr 21
Turkey: scarce water for Istanbul,**, map. p30 Apr 21
BuRec's Floyd Dominy: water is survival,**. Cover and p38 May 5
President Johnson to speak on world water needs. p26 May 12
East and West argue on federal water resources policy. p74 May 26
Two Soviet plans to save Caspian sea,*, map. p143 May 26
Texas plans $2.7 billion water redistribution project, map. p19 Jun 9
South Calif votes huge water bond issue, map. p73 Jun 16
West Texas wants to be included in state water plan, map. p15 Jun 30

WATER RESOURCES
***Aqueducts, Reservoirs**
Old aqueducts still provide Istanbul's water,**, map. p30 Apr 21
Calif Water Plan: Angeles Tunnel, Tehachapi tunnels – job readied for bids. p19 Apr 28
California applies for Aqueduct project license. B p28 Apr 28
Shelbyville Reservoir and dam work, unit prices. p200 May 26
AWWA urging Interstate Water Authorities. p15 Jun 2

Laurel Reservoir, Ky. diversion tunnels: unit prices. p136 Jun 16

***Treatment**
Hard water is healthy. CW p17 Jan 13
Desalting plants planned in Israel and in California. p15 Jan 20
Drinking water from waste water in successful Nassau County experiment, New York. p16 Jan 20
South Calif. to test nuclear desalter. CW p19 Feb 17
Desalter aids St. Thomas' water supply,*,**, Virgin Islands,*. p71 Feb 17
Desalter for Key West, Fla. p16 Mar 31
Udall pushes for big desalter in south Calif. p77 Apr 7
Elimination of sand in Brazilian water system,** diags. p98 Apr 7
Two pilot plants for reverse osmosis desalters. p21 Apr 28
Construction starts on San Diego hybrid desalter. p23 May 12
Interpretations on turnkey Key West desalter. RC p16 May 26
Water desalted at 3c per 1000 gal in Long Beach, Cal. p19 Jun 23

***Waterworks, water mains**
Westlands Water Distribution System job begins in Calif at $157m. p25 Jan 13
Florida waterline, unit prices. p45 Feb 3
Concrete pipe wins Monroe County water line unit prices. p69 May 12

WATERWAYS, see: CANALS; RIVERS

WEATHER
New Jersey highway department experiments with "fog broom". CW p9 Feb 24
Tornadoes destroy bldgs in central Mississippi. p19 Mar 10
Towboat breaks Mississippi ice jam,*. p17 Mar 10
McMurdo Station, Antarctica, gets new Navy personnel bldg. p17 Mar 24
Tornadoes studied in Catholic Univ of America lab. p21 Apr 14
The week of the wickedest winds,**. p74 Jun 16
Wind pattern shift brings rain to East coast, map. p18 Jun 23

WELDING, see also: PRODUCTS
Mill welds steel plate into beams. p34 Jan 6
Ultrasonic weld used at Angles Stadium in Anaheim,** p26 Feb 3
Automatic welding for CENO space frame system,*. p36 Mar 24
Portable nuclear gage measures density of snow. p37 Apr 28

WHARFS, see: PORTS AND HARBORS

WIND, see: ACCIDENTS; WEATHER

WIRE, see: CABLES, WIRE

WOOD, see: LUMBER

Z

ZONING
see also: BUILDING CODES; CITIES; PLANNING
Proper zoning is only answer to jet noise: don't build near airports. WO p23 May 19

NAMES

AALTO, ALVAR
Would make Helsinki one of Europe's truly remarkable capitals,**, maps. p54 Feb 17
ACKLEY, GARDNER
Leans toward tax rise, but now now,*. p85 Mar 17
Corporate profits to blame, says chairman of Council of Economic Advisers,*. p19 May 12
Plea for adherence to wage guidelines goes unheeded. p69 Jun 9
ALEXANDER, WILLIAM D.
ENR's Man of the Year. RCs p16 Mar 17
ANDERSON, ARTHUR R.
Becomes president of American Concrete Institute,*+ p259 Mar 17
ANDREWS, EARLE T.
President of Pennsylvania Glass Sand Corp. named nominee for ASCE presidency. p75 May 26
ARROYO, R. N.
Building inspection — construction's weak link. RC p6 Jan. 13
ARUNDEL CORP., BALTIMORE, MD.
Receives merger offer from Eastern Stainless Steel Corp. p16 Jan 27
ARUP, OVE
Founder and senior partner of London consulting firm is Britain's architectural catalyst,**+ p170 Apr 7
ATKINSON, GEORGE H.
Comments on Mangla Dam while receiving Moles Award. CW p7 Feb 3

BACON, LOUIS A.
Public relations and engineers. RC p5 Jan 6
BAILEY, WILLIAM M.
Top 500 design firms. RC p40 Jan 27
BALLINGER CO., PHILADELPHIA, PA.
Ballinger architect-engineers battle designer builders,**. p36 Mar 31
BALOCK, JOHN, JR.
Water collection project not practical. RC p40 Apr 7
BARNES, HARRY C. (Mrs.)
Who is to blame in union tests? RC p32 Feb 10
BARNEY (W.J.) CORP., NEW YORK, N. Y.
Safety procedures save contractor $198,000,**. p33 May 5

BAYLESS, GLEN
Congratulations on situs picketing story. RC p4 Jun 23
BECHTEL CORP., SAN FRANCISCO, CAL.
Management reorganizes. p62 May 12
BERGER, LOUIS
U. S. contractors abroad: good estimates, rich contingencies,*. p15 Jun 23
BLACKMON, LARRY
NAHB president proposes credit control. p77 Apr 21
BOISE CASCADE CORP., BOISE, IDAHO
Curing paint with electron beams. p208 Mar 17
BOKELMANN, STANLEY O.
Question of primacy on school building systems. RC p4 Jun 23
BOND, HORATIO
Plea for diversity and against national building code. RC p9 May 19
BORCHMAN, DAVID
Wage guidelines? RC p16 Feb 10
BOYD, ALAN S.
The end of the Interstate program won't end federal highway aid. p71 Jun 16
BOYNTON, ROBERT S.
Views on treated bases for pavements. RC p8 May 12
BRIGGS, ROBERT C.
Building inspectors should be licensed. RC p6 Mar 24
BRITTAIN, K. H.
Speak out on building esthetics. RC p6 Mar 24
BRUECK, PHILIP F.
Cheers for construction men in big Northeast blackout. RC p12 Jan 13
BRYAN, R. R.
Amazon River transportation is not new. RC p6 Mar 31

CHESHIRE, HERB
Construction escalates in Vietnam,**, map. p11 Feb 10
Time and logistics complicate construction in South Vietnam,**, map. p60 Feb 10
CHICAGO BRIDGE & IRON CO., OAK BROOK, ILL.
Gross income incorrection reported for 65 and 64. RC p4 Jun 23
CONLIN, WALTER F., JR.
Works on Center for the Performing Arts in Washington, D. C., for Several Associates,**. p46 Jun 9

CORBETTA, ROGER
Vigorous campaign for quality in concrete. e p88 Mar 24
Profitless prosperity discussed at Chicago Building Congress meeting,*. p298 Jun 16
CORRADI, PETER
Transplant U. S. agencies abroad,*. p15 Jun 23
CROW, TRAMMEL
ENR's Man of the Year. RCs p16 Mar 17
CVIKL, ERNST
Vienna engineer develops CENO space frame system,**. p36 Mar 24

DAVIS, WILLIAM G.
ENR's Man of the Year. RCs p16 Mar 17
DAVY, T. E.
Burning paunch manure. RC p8 May 12
DEATON, CHARLES
Denver architect builds unconventional curved structures,**. p38 Apr 28
DE LANEY, PAUL W.
Indictment of Seattle court building. p83 May 19
DE LEUW, CATHER & CO., CHICAGO, ILL.
Gets rapid transit contract for Seattle and Wash., D. C. CW p17 Jan 13
DE MOLL, JOHN
Lump-sum bidding gets the best price,**. p36 Mar 31
DE MOLL, LOU
Architects can match package builders,**. p36 Mar 31
DETTMER, HARRY
Engineers as managers. RC p33 Mar 17
DEUTSCH & SHEA, INC., N. Y.
Index for engineer scientist, demand still high. B p57 Feb 10
DE VAUBAN, SEBASTIEN LE PRESTRE
17th century French builder on contractors' fees and shabby work. p83 Jun 16
DICKEY, ROBERT
Head of Dravo Corp.—company of uncommon enterprise,**. p41 Apr 21
DILLON, ROBERT M.
Or-equal clauses point to deeper ills. p14 Mar 31

(Continued)

(Continued)

DIRKSEN, SEN. EVERETT M.
Contractor's friend at the AGC convention. p15 Mar 24
DOMINICK, PETER H.
Colorado senator to revive situs picketing action. CW p11 Jun 23
DOXIADIS, CONSTANTINOS
Speaks on the future of transportation at the AGC convention. e p64 Mar 31
DRAVO CORP., PITTSBURGH, PA.
Top contractor famous for Ohio, Allegheny and Monongahela river projects,°°. p41 Apr 21
DUNN, CARROL H. (Brig. Gen.)
En route to Vietnam to direct military construction. CW p47 Feb 10

EDEN, PAUL L.
Top 500 design firms. RC p57 Jan 27
ENGER, REAR ADM., W. M.
ENR's Man of the Year. RCs p16 Mar 17

FAGEL, NORMAN I., INC., MARYSVILLE, CAL.
Contractor squeezed financially. p164 Jan 27
Heavy contracting firm will continue operations in spite of bankruptcy. p81 Apr 14
FISHER, ELIZABETH
Letter from Sydney, Australia – City with a brand new face,°°. p32 Jan 20
FITZGERALD, JOHN P.
Orthotropic design—floating span—steel barge: contributions to design. RC p16 Apr 7
FLING, RUSSELL S.
Concrete specs don't have to be tedious,°. p87 Mar 17
FOWLER, HENRY H.
Advises against moving fast on new taxation,° p85 Mar 17
FRIEDKIN, J. F.
Mexico kept control of dam. RC p4 Feb 3

GAFFNEY, ARTHUR T.
Good safety record at Barney Corp,°°. p33 May 5
GARVIN, JOHN C.
New Jersey labor relations consultant suggests 6 steps to better bargaining. p82 Apr 21
Urges management to form national associations. p58 Jun 2
GATES, MARVIN
A gambler speaks on vigorous inspection standards. RCs p42 Mar 17
GATES CONSTRUCTION CORP, LITTLE FERRY, N.J.
Smart contractor hits on seven tricks to speed piledriving,°°. p110 Jan 27
GENERAL ELECTRIC CO., SCHENECTADY, N.Y.
Pull out of nuclear power plant business. p67 Jun 23
GIRAND, JOHN
Top 500 design firms. RC p57 Jan 27
GOONAN, T. E.
Fire Code Consultants? RC p16 Jan 27
GORDON, DAVID
For more gleam in engineering education. RC p16 Jan 27
GRAY, RICHARD J.
Retired union leader dies. p64 and e p108 May 12
GREGSON, WILFRED J.
Top 500 design firms. RC p40 Jan 27
GRIBETZ, JUDAH
Becomes president of Schacht Steel Co,°. p53 Mar 10
GRUEN (VICTOR) ASSOCIATES, LOS ANGELES
American architect to create a master plan for Teheran. B p21 Apr 21

HAGGERTY, C. J.
Rejects the wage guidelines: calls any retaliation unwarranted,°°. p13 Feb 24
HALE, JOHN S.
Perspective needed in education. RC p6 Mar 10
HAMMERSMITH, R. J.
Corrections on short-span bridge design story made by Prestressed Concrete Institute. RC p16 Apr 7
HARDIN, IRA
Stop union grab for more strike power. CW p61 Jan 27
HARNED, DAVID
Asking for trouble with no safety helps,°. RC p8 Mar 17
HARRIS, FREDERIC R., INC., NEW YORK
Huge consulting firm is now decentralized. p40 Jun 2
HATTIS, A. D.
Supplemental data on total energy system at Chapel Hill development, Ohio. RC p57 Jan 27
HOLMES, EDWARD H.
The federal government won't take $4 billion from the economy abruptly. p71 Jun 16
HOUSEL, PROF. WILLIAM S.
ENR's Man of the Year. RCs p16 Mar 17
To get Distinguished Service Award from Highway Research Board. CW p7 Jan 20
HOWES, BRAD
Should CEs be civil? RCs p6 Feb 10
HUTCHINSON, JOHN T.
An inspector speaks on bidding. RCs p42 Mar 17

INTERNATIONAL BUSINESS MACHINES CORP.
Ready for metric system. B p21 May 5

JOHNSON, ALFRED E.
The states may go to Congress with their own plan if they don't like BPR's. p71 Jun 16
JONES, CLARENCE R.
Top 500 design firms. RC p57 Jan 27
JONES, GORDON W.
President of Kellogg Co. heads National Constructors Association,°. p72 Jan 27

KAJIMA CONSTRUCTION CO., TOKYO, JAPAN
Versatile giant of Japanese construction,°°. Cover and p44 Apr 14

KAJIMA, MORINOSUKE
Chairman of Kajima Construction Co. has third highest earnings in Japan. CW p15 May 12
KALVE, ERNEST
Beauty of industrial buildings. RC p48 Mar 17
KEENE, PHILIP
Blasting blasted. RC p33 Mar 17
KETCHUM, MORRIS JR.
AIA President resigns from National Committee on Hwy Beautification. e p84 Jun 9
KIDDE (WALTER) CONSTRUCTORS INC., NEW YORK CITY
To build air base in Vietnam. p20 Jun 9
KIMBALL, PROF. WILLIAM P.
Former engineering dean at Dartmouth to become assistant secretary-education at ASCE. p75 May 26
KIMBALL, WILLIAM P.
Former dean of Dartmouth's Thayer School of Engineering to join ASCE as head of education. p202 Jun 16
KIMMONS, G. H.
Becomes top construction man in Tennessee Valley Authority. p134 Jan 27
KNOERIE, JOSEPH K.
Views on treated bases for pavements. RC p8 May 12
KNOOP, FRED
Whitman, Requardt's specialist in undersea research,°. p38 Jan 6
KOENEN, J. F.
Planning, utility vs beauty. RC p4 Jan 6
KOMATSU MFG CO., TOKYO, JAPAN
Advertises his tractors on building top,°. p168 Jun 16
KOSYGIN, ALEKSEI
Soviet premier sees room for construction profits. p65 Mar 24
KUESEL, THOMAS R.
BARTD system designed to roll with earthquake punches,°°, diag. p24 Apr 21

LAKE, J. O.
Questions and answers on concrete piles. RCs p48 Mar 17
LEGGETT, ROBERT F.
Fine points on building codes. RC p33 May 26
LEITNER, ELTON R.
Uniform work descriptions can speed unit price estimates. p130 Mar 17
LEITNER, GORDON F.
Interpretations of turnkey Key West desalter. RC p16 May 26
LeMESSURIER, WILLIAM J.
Boston structural engineer cuts tonnage of steel frames. p18 Apr 21
LEVINE, LEWIS
Early orthotropic plate designs. RC p6 Mar 10
Orthotropic design—floating span—steel barge: contributions to design. RC p16 Apr 7
LIN (T.Y.) & ASSOCIATES, VAN NUYS, CALIF.
Files libel suit against Western Concrete Structures in Alaska apartment case. p56 Feb 10
LINDSAY, MAYOR JOHN V.
Picks a fight with Robert Moses. e p326 Mar 17
LINNEMAN (F.H.) CO., LAKEWOOD, COLO
Contractor quits water tunnel job, sues. p233 May 26
LONNFORS, PER-ERIK
Letter from Helsinki,°°, maps. p54 Feb 17
LOUGHIN, MARSHALL I.
Water polluters must pay. RC p8 Mar 17
LOUIS, LEO
Heads American Water Works Association,°. p56 May 19
LOWTHIAN, GEORGE
Britisher says we have "Too many damned unions." p170 Jan 27

MAHONE, PROF. L. W.
CE should stand for construction engineering rather than civil engineering. RC p4 Jan 6
MAIERLE, J. A.
Top 500 design firms. RC p40 Jan 27
MALE, RAYMOND
New Jersey Labor Commissioner arbitrates wage dispute. p83 and e p100 Apr 14
MARTIN, WILLIAM McC.
Federal Reserve Board Chairman would raise taxes,°. p19 May 12
MEANY, GEORGE
Ready for wage battle,°. p49 Mar 3
AFL-CIO president puts full employment economy before the rights of Negroes. CW p11 Jun 9
MELNIKER, ALBERT
Politics and highway planning. RC p8 May 12
MICKLE, GRANT
Wants more highway research in his ARBA speech,°. p14 Mar 3
MIES VAN DER ROHE & ASSOCIATES, CHICAGO
Plan Montreal's modern building complex p56 Feb 10
Design Washington library,°. p16 Mar 3
MILLARD, CHUCK
Whitman, Requardt's specialist in outer space,°. p38 Jan 6
MOORHOUSE, D. C.
Heads eastern office of Woodward, Clyde, Sherard & Assoc.,°°. p52 May 12
MORISSEAU, JAMES J.
More credits for Webster College Center of Performing Arts. RC p40 Jun 16
MORRISON-KNUDSEN, BOISE, IDAHO
Roadbuilding equipment shipped to Peru up the Amazon River. p16 Jan 20
MOSES, ROBERT
Fights Lindsay on city transportation. e p326 Mar 17
MOUTON, WILLIAM JR. JR.
Questions and answers on concrete piles. RCs p57 Mar 17
MUIR, LOGAN N., JR.
Top 500 design firms. RC p57 Jan 27

MUSKIE, SEN. EDMUND S.
Fight against water pollution requires set contact in urban areas,°. p19 Mar 24
MYERS, HUDSON
Whitman, Requardt's specialist in highway design,°. p38 Jan 6

McBRIDE, HOLLIS
Project manager for R. B. Potashnick's Japanese expressway job,°°. p94 Apr 7
McCORD, KEN
Whitman, Requardt's specialist in master planning,°. p38 Jan 6
McMORRAN, J. BURCH
Highway Research Board head faces a critical year,°. p70 Jan 27

NATIONAL WASTE CONVERSION CORP., N.Y.
Solid waste turns into fertilizer, diag. p46 Apr 28
NAYLOR, HENRY
Whitman, Requardt's specialist in office space design,°. p38 Jan 6
NEALE, WILLIAM F.
Partner in Whitman, Requardt,°. Cover and p38 Jan 6
NEPTUNE METER COMPANY, NEW YORK, N.Y.
Acquires General Services Co. of Corvallis, Ore. B p18 Feb 3
NERVI, PIER LUIGI
To design Norfolk, Va. cultural center. B p25 Jan 6
NES, CHARLES M., JR.
New president of American Institute of Architects pushed education reforms,°°. p50 Jun 23
NILSEN, H. B.
Construction consultants need a push. RC p33 Apr 7

OLITT, ARNOLD
Sparks new business for Woodward, Clyde, Sherard & Assoc.,°°. p57 May 12
OSHIVER (SAMUEL I.) & ASSOCIATES, PA.
Owner sues architect-engineer for $7 million. p15 Jan 20
OSMAN, OSMAN AHMED
President of Arab Contractors building Aswan High Dam to speak at water conference in Denver. CW p17 Mar 31
Cancels USA visit, takes Premier Kosygin around Aswan Dam job. CW p21 May 19
OWINGS, NATHANIEL
Heads Skidmore, Owings & Merrill architectural community,°°. p183 May 26

PARCHER, ART
Wage guidelines? Rc p16 Feb 10
PERINI, LOUIS R.
"You've seen the end of us," – he tells BARTD. p27 Feb 17
PERINI CORP., FRAMINGHAM, MASS.
Perini News on BARDT troubles, on bids and estimates. e p252 May 26
PERKINS, BERTRAM
Succeeds Lyman Wilbur in Morrison-Knudsen's Vietnam operation. p106 Feb 17
PERRONE, ALFRED J.
Administrative partner in Severud Associates,°°. p46 Jun 9
PERRY, DEAN, HEPBURN & STEWART, BOSTON, MASS.
Architectural firm finds restoration of historic sites profitable. B p27 May 12
PETO, E. M.
Planners of Detroit elevated transport should check their arithmetic. RC p6 Apr 28
PHILLIPS, ALTON
Small contractor heads AGC,°. Cover and p43 Mar 24
and correction RC p6 Apr 28
Advise to President on inflation and construction spending. CW p67 Apr 7
Efficiency and productivity to fight inflation. CW p11 Apr 21
PICKETT, G. E.
New director of North Carolina State Department of Water Resources. p134 Jan 27
POPHAM, R. R.
Top 500 design firms. RC p57 Jan 27
PORT, LEONARD L.
Proper identification for San Francisco apartment builders. RC p40 Jun 16
PORTMAN, JOHN C.
ENR's Man of the Year. RCs p16 Mar 17
POTASHNICK, R. B.
U. S. contractor builds Japanese expressway,°°. p94 Apr 7
PRIEST, JIM
Estimator on estimating. RC p16 May 26
PRUGH, BYRON J.
Should CEs be civil? RCs p6 Feb 10

QUADE, MAURICE
Noted consultant dies at 65. p75 Jun 16
QUIGLEY, JAMES M.
Temporary chief of federal Water Pollution Control Administration. WO p9 Jan 6
The federal government can't work alone on water pollution,°. p19 Mar 24
QUIRIN, EDWARD J.
President and chairman reorganizes Frederic R. Harris for growth,°°. p40 Jun 2

RANDOLPH, SEN. JENNINGS
To become chairman of Senate Public Works Committee. WO p9 Mar 3
RAPUANO, MICHAEL
Heads Advisory Board of Urban Consultants to advise BRP. p134 Jan 27

REESE, R. C.
ENR's Man of the Year. RCs p16 ... Mar 17
REGNIER, RAYMOND C.
Whitman, Requardt's specialist in ocean research and engineering,*. p38 ... Jan 6
REITZ, HENRY M.
Golden mean and guidelines in construction inspection and safety measures. RC p16 ... Jun 16
REQUARDT, GUSTAV J.
Senior partner of Whitman, Requardt,*. Cover and p38 ... Jan 6
REXACH CONSTRUCTION COMPANY, PUERTO RICO
Largest contractors in Puerto Rico,**. p54 ... Apr 28
RITCHIE ASSOCIATES, BROOKLINE, MASS.
Controversy over selection of architects for University of Mississippi. p231 ... May 26
RITTER, ROY H.
Senior partner in Whitman, Requardt,*. Cover and p38 ... Jan 6
ROBERTS, SIR GILBERT
Partner of Freeman, Fox & Partners, London, designs Canada's radio-telescope. RC p33 ... Mar 17
ROBERTSON, FRANK
Promised brilliant future in construction. RC p52 ... Feb 10
ROMUALDI, JAMES P.
Heads transit research at Carnegie. p52 ... Feb 10
ROTHENSTEIN, GUY G., NEW YORK, N.Y.
Introduces the Balency-MBM European system into United States housing market,**. p24 ... Apr 14
ROYER, KING
Should CEs be civil? RCs p6 ... Feb 10
RUBIN, EDWARD
Bumpcutters make groovy, glaring surface on the San Bernardino Freeway,*. RC p6 ... Apr 28
RUDERMAN, JAMES
New York office designer dies at 67. p114 ... Feb 17
RYAN, ROBERT H.
Member of National Commission on Technology, Automation and Economic Progress speaks on housing and building codes. p24 ... Apr 28

SAARINEN, ELIEL
Gave Helsinki its pattern of satellite suburban towns,**, maps. p54 ... Feb 17
SACRA, WILLIAM E.
Too many federal agencies involved in water and sewage grants. RC p40 ... Apr 7
SAFDIE, MOSHE
Architect for Montreal's Habitat 67. p84 and e p324 ... Jun 16
SARDIS, JOHN
San Francisco architect-engineer charged with practicing architecture—conflict still simmers. p78 ... Apr 21
SCHACHT, LAWRENCE
Elected chairman of the board and chief executive officer of Schacht Steel Co,*. p53 ... Mar 10
SEMENZO, A.
Vice Director of ELC-Electroconsult, Milan, Italy on his firm and Peru's hydro. RC p16 ... Jun 16
SEVERUD-PERRONE-FISCHER-STURM-CONLIN-BANDEL, NEW YORK, N.Y.
Ideas spark unusual structures,**. p46 ... Jun 9
SHANNON, DR. JAMES A.
National Institute of Health director worries about lack of dental students through lack of facilities. WO p13 ... Mar 10
SHEA, JOHN F.
Good safety record at Barney Corp,**. p33 ... May 5
SHERMAN, HAROLD
Top 500 design firms. RC p57 ... Jan 27
SHNURER, JOSEPH
Should CEs be civil? RCs p16 ... Feb 10
SKIDMORE, OWINGS & MERRILL
Architectural community employs 1,000 people in 4 regional offices,**. p183 ... May 26
SMITH, ARNOLD R.
Top 500 design firms. RC p40 ... Jan 27
SOLOMON, FRED S.
Against national building code. RC p16 ... Jun 16
SPROULE, F. R.
Lord Tennyson and not Shakespeare was quoted by Alton Phillips in March issue. RC p6 ... Apr 28
STANDARD DREDGING CORP., NEW YORK
Receives merger offer. p163 ... Jan 27
STARNES, (COL.), W. L.
Frank Robertson's mark. RC p32 ... Feb 10
STOKES, B. R.
San Francisco Bay Area Rapid Transit has problems. RC p4 ... Feb 3
STOLL, H. M.
Difference of opinion on steel and concrete research-RC p71 ... Mar 17
STURGIS, ROBERT S.
Politics can be useful in deciding Highway location. RC p4 ... Feb 3
STURM, WERNER C., JR.
Works on State University, Albany campus for Severud Associates,**. p46 ... Jun 9
SWIFT, WALTER H.
Graphic aids translate computer-calculated CPM networks, graphs. p30 ... Mar 3

TAMBLYN, HAROLD
PNYA retains contractor-consultant for World Trade Center job. RC p11 ... Apr 7
TANGE, KENZO
Japanese architect received 1966 AIA Gold Medal. B p79 ... May 26
TANNER, D. N.
Consultants did estimate everything but inflation. RC p33 ... Apr 7
TATLOW, RICHARD H.
Becomes ASCE President-Elect,*. p21 ... Jun 23
TEER, NELLO L., JR.
Underlines a basic difference between U. S. government and contractors on foreign jobs,*. p15 ... Jun 23
THAYER, HARRY J.
Water polluters must pay their share. RC p6 ... Apr 28
THOMPSON, JOHN P.
Fine points on building codes. RC p33 ... May 26
TIPPETTS, ABBETT, McCARTHY STRATTON, N.Y.
Will design Straight Creek Tunnel for the Colorado Dept. of Hwys. p16 ... Mar 3
TISHMAN REALTY & CONSTRUCTION CO., N.Y.
Named World Trade Center consultants by PNYA. p15 ... Mar 3
TOWNE, A.
Congratulations for pungent ENR writing. RC p32 ... Feb 10
TUPPER, R. W.
AAA favors user taxes. RC p40 ... Jun 16
TURNER, R. P.
Top 500 design firms. RC p57 ... Jan 27

UDALL, STEWART L.
Praises ENR's support of equal employment opportunity. RC p12 ... Jan 13
The conservation flag flies over Interior,*. p18 ... Mar 24
Interior Secretary pushes for big desalter in south California. p77 ... Apr 7

VAN HART, JOSEPH F.
Errors in April story on Muddy Run Pumped-Storage. RC p33 ... May 26
VOLPE, GOV. JOHN A.
Involved in choice of architects controversy. p231 ... May 26

WAGGONER, EUGENE B.
Consulting Engineers Council head is principal at Woodward, Clyde, Sherard & Assoc.,**. p50 ... May 12
WALKER, ERIC A.
Chairman of the Coals Committe reports to educators,*. p11 ... Jun 30
WARREN BROS, CAMBRIDGE, MASS.
Largest paving company gets merger offer from Ashland Oil & Refining Co. p44 ... Mar 31
WEAVER, ROBERT C.
First secretary of HUD,*. p12 and e p84 ... Jan 20
Housing and Urban Development Secretary cools fever for national building code. WO p9 ... Mar 31
WEESE, HARRY M.
Named architect for Washington rail transit system. CW p77 ... Mar 17
WELCH, M. F.
Appointed head U. S. section of International Joint Commission (Canadian-U.S. water). B p25 ... Jan 6
WHITMAN, REQUARDT AND ASSOCIATES, BALTIMORE, MD.
Diversity and teamwork are key to success,**. Cover and p38 ... Jan 6
WHITTON, REX
Wants more beauty on highways in his ARBA speech,*. p14 ... Mar 3
WIGGS & MAALE, NAPLES, FLA.
Contractor becomes a retailer for National Labor Relations Board. p89 ... May 19
WILBUR, LYMAN D.
Time and logistics complicate construction in South Vietnam,**, map. p60 ... Feb 10
Construction's Man of the Year,**. Cover, p99 and e p176 ... Feb 17
WILLIAMS-McWILLIAMS- NEW ORLEANS, LA.
Receives merger offer from Avondale Shipyards. p163 ... Jan 27
WILLIAMSON, DUFF
Should CEs be civil? RCs p6 ... Feb 10
WILSON, F. C.
Building inspection—construction's weak link. RC p6 ... Jan 13
WIRTZ, WILLARD
Labor Secretary expects labor to show self-restraint in wage decisions,**. p13 ... Feb 24
Labor Secretary may enter wage dispute. p23 ... Mar 31
A new approach to wage restraint,*. p83 and e p100 ... Apr 14
WOODWARD, CLYNE, SHERARD & ASSOC., SAN FRANCISCO, CAL.
Geophysics is big profitable business for fast-growing consulting engineers,**. p50 ... May 12

ZACHRY, (H. B.) CO., SAN ANTONIO, TEX.
Amazon River transportation is not new. RC p5 ... Mar 31

PRODUCT MANUFACTURERS

ACME INDUSTRIES, JACKSON, MICH.
Liquid chillers. B p41 ... Feb 3
AEROIL PRODUCTS CO., HACKENSACK, N. J.
Resurfacer of asphalt pavement. B p41 ... Feb 3
AIR PLACEMENT EQUIPMENT CO., KANSAS CITY, MO.
Concrete pump. B p41 ... Feb 3
ALLIS-CHALMERS MFG. CO., MILWAUKEE, WIS.
Power shift. B p41 ... Feb 3
AMERICAN AIR FILTER CO., INC., LOUISVILLE, KY.
Long-life air filters. B p169 ... Apr 7
AMERICAN TRACTOR EQUIPMENT CORP., OAKLAND, CALIF.
Vyba mount ripper. B p41 ... Feb 3
Grader attachments rip, cut, compact asphalt, p164 ... Apr 7
Cable layer. B p49 ... May 12
AMF THERMATOOL, NEW ROCHELLE, N.Y.
Mill welds steel plate into beams. p34 ... Jan 6
ANSUL CO., MARINETTE, WIS.
Dry chemical extinguisher douses all classes of fire,*. p220 ... Mar 17
ARROW MFG. CO., DENVER, COLO.
Self-propelled hydraulic rig drives posts quickly,*. p42 ... May 12
ATHEY PRODUCTS CORP., RALEIGH, N.C.
Rear-dump trailer can carry 10 cubic yards,*. p222 ... Mar 17
Aluminum Div.'s bottom-dump trailers. p175 ... May 26
AUTOCAR TRUCKS, EXTON, PA.
Off-highway use intended for five autocar trucks. p131 ... Jan 27
AVIS MFG., INC., WICHITA, KAN.
Cable burier. B p166 ... Apr 7

BALDERSON, INC., WAMEGO, KAN.
Bowldozer fits Cat tractors,*. p165 ... Apr 7
BALDWIN-LIMA-HAMILTON CORP., LIMA, OHIO
Vibrating shoes compact rock,*. p30 ... Mar 31
BETHLEHEM STEEL CORP., BETHLEHAM, PA.
Lightweight steel sections. B p224 ... Mar 17
Water pipe joint,*. B p160 ... Apr 7
BRIGGS & STRATTON CORP., MILWAUKEE, WIS.
Single cylinder engine. B p198 ... Jun 16
BROS, INC., MINNEAPOLIS, MINN.
Designates pneumatic rollers by wheel loads. p31 ... Mar 31
BUTLER MFG. CO., MINNEAPOLIS, MINN.
Pneumatic delivery trucks. B p169 ... Apr 7

CALA-PRODUCTS, INC., SANTA FE SPRINGS, CAL.
Rapidly activated crane cuts tower setting time. p46 ... Jan 20
CARLON METER CO., GRAND HAVEN, MICH.
Water meters. B p38 ... Feb 24
CASE, J.I., CO., RACINE, WIS.
Tractor has hydraulic controls,*. p128 ... Jan 27
CATERPILLAR TRACTOR, PEORIA, ILL.
Tractor becomes a compactor,*. p125 ... Jan 27
Protective chains. B p94 ... Feb 17
Crawler-mounted pipelayer lays large-diameter pipe. p35 ... Feb 24
Upgrades two motor graders,*. p210 ... Mar 17
Deep ripping shank. B p49 ... May 12
Articulated loader moves 5 cu yd,*. p169 ... May 26
Beefed-up D7. B p45 ... Jun 9
CHALLENGE-COOK BROS, INC., LOS ANGELES, CAL.
Gage counts drum turns on concrete mixer truck. p219 ... Mar 17
CHANNEL CONSTRUCTION, INC., KEENE, N.H.
Hydraulic thumb makes backhoe more versatile. p175 ... May 26
CHARLES MACHINE WORKS, INC., PERRY, OKLA.
Trencher,*. B p166 ... Apr 7
CHRYSLER CORP., DETROIT, MICH.
Dodge tilt-cab truck designed for city traffic,*. p219 ... Mar 17
CHRYSLER CORP., DAYTON, OHIO
Airtemp's compact airconditioning. B p45 ... Jun 9
CLARK EQUIPMENT, BENTON HARBOR, MICH.
Rock shovel handles 13 cu yd,*. p34 ... Jan 6
Construction Machinery Div. builds an elevating scraper,*. p170 ... May 26
CLIPPER MFG. CO., LTD., ONTARIO, CANADA
Router widens pavement joints, cracks for sealing,*. p91 ... Feb 1
CLIPPER MFG. CO., INC., KANSAS CITY, MO.
Joint sealer. B p169 ... Apr 7
Joint brusher. B p49 ... May 12
COAST MANUFACTURING & SUPPLY CO., LIVERMORE, CAL.
Detoning fuse. B p38 ... Feb 24
CONCRETE EQUIPMENT CO., BLAIR, NEB.
Low, portable batch plants can be charged by loaders. p35 ... Feb 24
CONCRETE PUMP CO., BUCKS, ENGLAND
Pump can deliver concrete 45 cu yd per hour, 150 ft up. p91 ... Feb 17
CONSTRUCTION MACHINERY, INC., OKLAHOMA CITY, OKLA.
Autograde trims subgrades, bases,*. p84 ... Feb 17
CONSTRUCTION PRODUCTS, INC., WAUKESHA, WIS.
Self-propelled stabilizer processes soil in place. p196 ... Jun 16
CRUTCHER-ROLFS-CUMMINGS, INC., HOUSTON, Tex.
Cable layer,*. B p41 ... Feb 3

DAVIS MFG., INC., WICHITA, KAN.
Compact ditcher treads lightly,*. p130 ... Jan 27
Knife-blade cable layer will not damage lawns,*. p46 ... Jan 13
DAY & NIGHT MFG CO., CITY OF INDUSTRY, CAL.
Heat pumps. B p49 ... May 12
DEERE & CO., MOLINE, ILL.
Announces loaders,*. p128 ... Jan 27
DETROIT ENGINEERING & MACHINE CO., GARDEN CITY, MICH.
Cleveland Equipment Division's hydro mechanical device varies motor grader speed. p42 ... May 12
DIGGERS, INC., MELROSE PARK, ILL.
Service wire plow. B p166 ... Apr 7
DOYER & HAUSER, ASSEN, NETHERLANDS
Dutch firm makes slinging conveyor,*. p44 ... May 12

(Continued)

(Continued)

EATON YALE & TOWNE, INC., BATAVIA, N. Y.
Trojan loader has two pivots,*. p210 Mar 17
Trojan Division's rigid-frame loader line expanded by two models. p158 Apr 7
Trojan's pivoted loader features stability,*. p165 Apr 7
ELECTRIC VENTILATING CO., CHICAGO, ILL.
Damper stops ventilation when light is turned off. p31 Mar 31
ELECTROVERT, NEW YORK, N.Y.
Plastic waterstop, N. B p224 Mar 17
ETNYRE, E. D. &CO., OREGON, ILL.
Constant spraybar height. B p41 Feb 3
EVANS, ROBERT G., CO., KANSAS CITY, MO.
Masonry saw. B p41 Feb 3
EXPANSION PRODUCTS, INC., BROOMFIELD, COLO.
Eve belt. B p169 Apr 7
FORD MOTOR CO., DEARBORN, MICH.
Curing paint with electron beams. p208 Mar 17
FOSTER (L.B.) CO., PITTSBURGH, PA.
Open Bridge deck flooring never requires painting. p212 Mar 17
Flexible silicone coating for concrete. p212 Mar 17
FWD WAGNER, PORTLAND, ORE.
Scraper has hydraulic elevator,*. p172 May 26
GARRISON MFG. CO., LOS ANGELES, CALIF.
Power steering booster,*. B p94 Feb 17
GENERAL ELECTRIC CO., SCHENECTADY, N.Y.
Communication Products Dept. makes radio console. B p41 Feb 3
Large Lamp Dept. improves color rendition for mercury-vapor lamp. p48 Mar 24
Cybernetic anthropormorphic machines follow operator's movements,*. p37 May 5
GENERAL MOTORS CORP., DETROIT, MICH.
12-cylinde diesel to lead series with 530-hp range. p46 Jan 13
Euclid rear-dump truck has capacity of 50 tons. p38 Feb 3
Euclid's crawler tractor powered by 275-hp diesel. p35 Feb 24
Euclid Division's tailored rear-dump truck will haul 110-ton loads,*. p45 Apr 28
GENERAL TIRE & RUBBER CO., WABASH, IND.
Industrial Products Div.'s honeycomb makes a bridge joint,*. p184 Jun 16
GEOPHYSICAL EQUIPMENT MFG. CO., HOUSTON, TEX.
Six-wheel-drive amphibian has 50% greater traction. p175 May 26
GLEDHILL ROAD MACHINERY CO., GALION, OHIO
Fan-tail spreader,*. B p45 Jun 9
GOODYEAR TIRE & RUBBER CO., AKRON, OHIO
Off-highway tires. B p49 May 12
GROVE MFG. CO., SHADY GROVE, PA.
Crane Div.'s hydraulic utility crane. B p45 Jun 9
H & L TOOTH CO., MONTEBELLO, CALIF.
Maker claims "no spill" for bank sloper models,*. p160 Apr 7
HARNISCHFEGER CO., MILWAUKEE, WIS.
Truck crane,*. B p45 Jun 9
HEINWERNER CORP., WAUKESHA, WIS.
Construction equipment Division's excavator operates hydraulically,*- p30 Mar 31
HIAB HYDRAULICS, INC., WILMINGTON, DEL.
Hydraulic crane. B p45 Jun 9
HONEYWELL CORP., MINNEAPOLIS, MINN.
Electronic controller regulates electric heat, diag. p48 Mar 24
HUBER CORP., MARION, OHIO
Grader engine, gears reversed,*. p45 Jan 20
HYDRAULIC MACHINERY CO., INC., BUTLER, WIS.
Crawler-mounted backhoe reaches 25 ft for load. p158 Apr 7
HYSTER CO., KEWANEE, ILL.
Gooseneck trailer. B p41 Feb 3
Rear loader. B p41 Feb 3
INDUSTRIAL ENGINEERING & EQUIP. CO., ST. LOUIS, MO.
Multizone electric heater, B p198 Jun 16
INSLEY MFG. CORP., INDIANAPOLIS, IND.
Big hoe operates hydraulically,*. p44 Jan 13
INTERNATIONAL HARVESTER CO., CHICAGO, ILL.
Small crawler tractor is a versatile tool,*. p46 Jan 20
Hydraulic backhoes fit international tractors,*. p38 Feb 3
Sideboom handles pipe up to 48 in.,*. p86 Feb 17
V-8 diesel engines have high speed, fuel economy. p220 Mar 17
Revamps its light trucks,*. p155 Apr 7
Wheeled loader-backhoe lifts, digs hydraulically. p159 Apr 7
More speed and power for crawler-mounted loader. p173 May 26
Front-end loader,*. B p45 Jun 9
IOWA MANUFACTURING CO., CEDAR RAPIDS, IOWA
Radial stacking conveyors range widely in size. p173 May 26
JACUZZI BROS. INC., LITTLE ROCK, ARK.
Submersible pumps. p166 Apr 7
JAEGER MACHINE CO., COLUMBUS, OHIO
Trash pump. p169 Apr 7
Revolution counter. B p49 May 12
JAMES ELECTRONICS, INC., CHICAGO, ILL.
Ultrasonic testing device eliminates concrete coring. p92 Feb 17
JA-NA CO., ROCHESTER, N.Y.
Extruded plastic strips form concrete keyways,*. p179 May 26
JOY MFG CO., PITTSBURGH, PA.
Blower-exhauster. B p94 Feb 17
KOEHRING CO., LORAIN, OHIO
Hydraulic hoe has 1-yd capacity,*- p45 Jan 20
Thew-Lorain's articulated loader handles 5 cu yd,*. p161 Apr 7
Air and hydraulic systems run 35-ton truck crane,*. p159 Apr 7
Schield Bantam's hydraulic motors power truck crane operations. p164 Apr 7
Thew-Lorain's big articulated loader handles 5-cu-yd bucket. p46 May 12
Thew-Lorain's 75-ton truck crane has tandem main cable drums,*. p59 May 19
Kocal's big rig trims, spreads, compacts,*. p172 May 26
K-W DART TRUCK CO., KANSAS CITY, MO.
End-dump truck hauls 110 tons,*. p84 Feb 17
LE TOURNEAU (R.G.) INC., LONGVIEW, TEX.
Scraper train hauls 360 tons,*. p169 May 26
LEWIS WELDING & ENGINEERING CORP., CLEVELAND, OHIO
Cummer's asphalt plants available to batch up to five tons. p158 Apr 7
LIFETILE CORP., FREMONT, CAL.
Concrete roofing tile,*. B p45 Jun 9
LINK-BELT SPEEDER CO., CEDAR RAPIDS, IOWA
Crawler designed for distance,*. p44 Jan 13
MACK TRUCKS, INC., ALLENTOWN, PA.
Builds big dumper-mixers,*. p86 Feb 17
MANITOWOC ENGINEERING CO., MILWAUKEE, WIS.
Truck crane does double duty as a tower crane,*. p214 Mar 17
MANUFACTURING CO., LOS ANGELES, CALIF.
Tandem vibratory roller has hydrostatic drive. p177 May 26
MARINDUS CO., INC., ENGLEWOOD, N.J.
Rotating flails clean metal or concrete flat surfaces. p44 Mar 10
MASSEY-FERGUSON, INC., DETROIT, MICH.
Rough terrain fork lift can raise load to 21½ ft. p177 May 26
MAXON CONSTRUCTION CO., INC., DAYTON, OHIO
Spreader goes on or off forms,*. p155 Apr 7
MIDWEST LAWN-SAVER EQUIP. CO., APPLETON, WIS.
Plow trailer. B p45 Jun 9
MORGEN MFG. CO., YANKTON, S. D.
Tracks for conveyor,*. B p45 Jun 9
MOTOROLA COMMUNICATIONS & ELECTRONICS, CHICAGO, ILL.
Solid state transceivers are efficient and stable. p177 May 26
Two-way FM radio. p198 Jun 16
MURPHY SCALE CO., SACRAMENTO, CAL.
Portable scale. B p49 May 12
McCAFFREY, M. P., INC., LOS ANGELES, CALIF.
Rock tongs. B p41 Feb 3
NATIONAL GYPSUM CO., BUFFALO, N.Y.
Plaster goes on concrete without a bonding agent. p49 Mar 24
NEW YORK AIR BRAKE CO., AURORA, ILL.
Pumping system. p166 Apr 7
NOBLE CO., INC., OAKLAND, CALIF.
Plant can batch 12 preset mixes,*. B p184 Jun 16
NORDSON CORP., AMHERST, OHIO
Distribution valve. p224 Mar 17
PACTOR CORP., WEST SACRAMENTO, CAL.
Segmented wheels aid compaction,*. B p192 Jun 16
Sheepsfoot compactor,*. B p198 Jun 16
PAUL (THOMAS L.) ASSOCIATES, AUBURN, N.Y.
Electronic draftsman plots maps. p130 Jan 27
PIQUA MACHINE & MFG CO., PIQUA, OHIO
Upright sump pump. B p38
PITTSBURGH CHEMICAL CO., PITTSBURGH, PA.
Coal tar-epoxy compound protects concrete pipe. p44 Mar 10
POLYMER CORP., SARNIA, CANADA
Machine applies butyl roofing,*. p170 May 26
POOR AND CO., MINNEAPOLIS, MINN.
Pioneer Engineering Division's stabilizing plant pugmill processes up to 400 tph. p47 Apr 28
Pioneer Engineering Div.'s portable conveyor. B p45 Jun 9
PRENTICE HYDRAULICS, INC., PRENTICE, WIS.
Hydraulic car unloader. B p169 Apr 7
PRESERVATIVE PAINT CO., SEATTLE, WASH.
Latex paint. B p94 Feb 17
PROSSER INDUSTRIES, INC., ANAHEIM, CAL.
Submersible pump. B p38 Feb 24
RANCO INDUSTRIAL PRODUCTS CORP., CLEVELAND, OHIO
Plastic glazing compound. B p94 Feb 17
Primer for dry felt roofs,*. B p224 Mar 17
RAPIDS-STANDARD CO., GRAND RAPIDS, MICH.
Bucket elevators. B p41 Feb 3
RAYBESTOS-MANHATTAN, INC., PASSAIC, N.J.
Manhattan Rubber's lightweight conveyor belt. B p49 May 12
REPUBLIC STEEL CORP., CLEVELAND, OHIO
Roof decking. B p94 Feb 17
REVERE CHEMICAL CORP., CLEVELAND, OHIO
Plastic roofing compound. p169 Apr 7
REX CHAINBELT INC., MILWAUKEE, WIS.
Paving package. B p38 Feb 24
Batch plant is versatile with two gates per bin. p49 Mar 24
Mixer drum tilts to discharge,*. p161 Apr 7
RIVINIUS, INC., EUREKA, ILL.
Dozer tilt system. B p41 Feb 3
Spreader. B p49 May 12
Brush rake. B p45 Jun 9
SARGENT ENGINEERING CORP, FORT DODGE, IOWA
Truck-mounted hydraulic crane can lift 40 tons. p48 Apr 28
SCOTSMAN CORP., TULSA, OKLA.
Fork lift truck can be towed at highway speeds. p59 May 19
SLURRY SEAL, INC., WACO, TEX.
Slurry machine. B p49 May 12
SOLEM MACHINE CO., ROCKFORD, ILL.
McCoy-Taylor's distributor. B p169 Apr 7
STABEST SALES CORP., GARWOOD, N.J.
Form releasing agent. B p94 Feb 17
STANCO MFG., SANTA MONICA, CALIF.
Mobile crane handles 3.5 tons,*. p125 Jan 27
Electro-hydraulic grapple,*. B p41 Feb 3
STONCO ELECTRICAL PRODUCTS CO., KENILWORTH, N.J.
Flood lights. B p41 Feb 3
STOW MFG. CO., BINGHAMTON, N.Y.
Concrete vibrator. B p41 Feb 3
Vibrator. B p38 Feb 24
STUDEBAKER CORP., MINNEAPOLIS, MINN.
Generating plant at Onan Div. p166 Apr 7
SUPERIOR SCAFFOLD CO., TORRANCE, CAL.
Bridge scaffold. B p45 Jun 9
TALBERT TRAILERS, RENSSELAER, IND.
Gooseneck trailers. B p198 Jun 16
TEJAS PLASTICS MATERIALS SUPPLY CO., FT. WORTH, TEX.
Insulated underground pipe,*. B p169 Apr 7
THE TRANE CO., LA CROSSE, WIS.
Room airconditioners. B p169 Apr 7
TWIN DISC CLUTCH CO., RACINE, WIS.
Converter-transmissions. p198 Jun 16
ULRICH MFG. CO., ROANOKE, ILL.
V-shoulder formed in one pass,*. p192 Jun 16
U. S. ELECTRICAL MOTORS, LOS ANGELES, CALIF.
Corrosion-resistant motor. B p41 Feb 3
VEEDER-ROOT, DANVERS, MASS.
Concrete quality control: B p198 Jun 16
WABCO, CHICAGO, ILL.
Goodman Division's motor grader attachment trenches to widen a road,*. p48 Apr 28
WACKER CORP., MILWAUKEE, WIS.
Small diesels. B p45 Jun 9
WALLACE SUPPLIES MFG. CO., CHICAGO, ILL.
Portable jack. B p49 May 12
WARNER & SWASEY CORP., CLEVELAND, OHIO
Hopto H-900's "Selectomatic Boom" matches requirements,*. p174 May 26
Hydraulic excavator digs 23 ft straight down. p196 Jun 16
WAUKESHA MOTOR CO., WAUKESHA, WIS.
Builds its line of V-8, V-12 diesels. p46 May 12
Horsepower is boosted in two Waukesha engines. p196 Jun 16
WESERHUETTE OTTO WOLFE GMBH., WEST GERMANY
Crushing plants move on crawlers,*. p174 May 26
WESTINGHOUSE AIR BRAKE CO., CHICAGO, ILL.
Floating roll gyrations crush rock or gravel. p222 Mar 17
WESTINGHOUSE AIR BRAKE CO., SIDNEY, OHIO
LeRoi Div.'s two-stage portable rotary compressor yields 450 cfm. p189 Jun 16
WEYERHAEUSER CO., TACOMA, WASH.
Decorative siding,*. B p41 Feb 3
WHITE MOTOR CORP., CLEVELAND, OHIO
Tractor trucks designed for easy maintenance. p179 May 26
Diamond T's tilt hood. B p45 Jun 9
WINCHARGER CORP., SIOUX CITY, IOWA
Portable engine generator. B p38 Feb 24
WINPOWER MFG. CO., NEWTON, IOWA
Equipment trailer. B p169 Apr 7
WISCONSIN TRAILER CO., RICHFIELD, WIS.
Gooseneck trailer. B p49 May 12
WYLIE MFG. CO., OKLAHOMA CITY, OKLA.
Two-ton tandem roller works in close quarters. p160 Apr 7

ENGINEERING NEWS-RECORD

Published By ENGINEERING NEWS-RECORD
Copyright McGraw-Hill, Inc., 1966